

# **EXHIBIT 9**



Equity Research  
Athletic Footwear & Apparel Brands  
Specialty Retail / Media: Video Games

AHEAD OF THE CURVE® SERIES

## SNEAKERS AS AN ALTERNATIVE ASSET CLASS, PART III

MAY 24, 2022

Our proprietary work confirms sneaker resale remains one of the most permanent trends in Consumer as transient pandemic spending patterns fade into 2023.

We see parallels between the rapidly scaling sneaker resale markets and NFT trading and investing. We surveyed 2,500 U.S. consumers to analyze growth in sneaker resale and NFT engagement.

Nike and Jordan's brand heat, distribution model (e-com expanding from \$11B to \$32B), and ROIC have never been higher. We model a high-teens EPS CAGR into FY26.

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May 24, 2022



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## EQUITY RESEARCH

May 24, 2022

## VIDEO ►

- Retail & Consumer Brands
- Apparel, Footwear & Textiles: Athletic Footwear and Apparel Brands
- Retailing/Specialty Stores: Luxury Brands

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## INDUSTRY OVERVIEW

## SNEAKERS AS AN ALTERNATIVE ASSET CLASS, PART III: AHEAD OF THE CURVE + VIDEO

## THE COWEN INSIGHT

The theme of sneaker resale is creating new markets and services and highlights the durability of Nike and Jordan Brand along with the secular growth of the sneaker category. Our proprietary data shows a growing addressable market for sneakers in the primary and secondary market. We see some parallels between sneaker resale and NFTs. Blockchain creates exciting new opportunities across Consumer.

**Our Thesis:** Our proprietary work confirms sneaker resale remains one of the most permanent trends in Consumer as transient pandemic spending patterns fade into 2023 - and we are further reinforcing the bullish category calls we have made since 2019 ([link](#)). Sneaker resale is significantly outperforming the broader E-commerce ecosystem which is decelerating into early 2022. Strength is fueled by Nike, Jordan Brand, Yeezy, StockX (with StockX legal issues with Nike likely to subside) and GOAT. Our market sizing re-affirms sneaker resale can reach \$30B globally by FY30 (16% CAGR). The durability of Nike's Consumer Direct Offense and ability to fuel the sneaker resale ecosystem highlights near sector-best growth and returns potential and meaningful upside in shares following its recent pullback to 25.5x FY24E EPS.



We see parallels between the rapidly scaling sneaker resale markets and NFT trading and investing. Many NFTs have zero intrinsic value (PV of future discounted cash flows), speculative characteristics and potential regulatory issues though some can retain and create significant value in a variety of forms including ownership/membership in a network. Similar to sneaker resale, which saw a host of skeptics in early days, a select few NFT brands and platforms have scaled (Yuga Labs - Private, \$4B valuation, OpenSea - Private, \$13B valuation) through creating utility, community and connections to the physical world. Billions of dollars worth of physical assets are likely to have links to digital assets in the future, and we expect Blockchain's role in Resale and Consumer branded goods to expand exponentially within Web3.

**What Is Proprietary?** We surveyed 2,500 U.S consumers to analyze growth in sneaker resale and NFT engagement along with demographics of NFT owners and traders. Our data suggests sneaker resale (which is dominated by Nike, Jordan Brand and Yeezy) is likely growing 30% to 40% y/y on top of ~100%+ growth since 2020. 27% of Men age 18-34

Please see pages 58 to 62 of this report for important disclosures.



have purchased an NFT, while 33% of the same cohort (Men age 18-34) have purchased something in a virtual world; these metrics likely have meaningful upside as Web3 develops.

**Financial & Industry Model Implications:** The sneaker resale expansion can be augmented through the explosive growth in Blockchain which could enable recurring royalties on digital assets and enhance authentication for leading brands (Nike, Jordan Brand, Yeezy, New Balance) - in contrast to the lack of direct economics they earn on resale. The ability to create and link physical assets on the blockchain has enormous potential for engagement, community building, content creation, event unlocking and capturing royalties on potentially billions of dollars of resale transactions. Further, NFTs and digital assets provide incremental and unique customer loyalty opportunities for luxury brands.

**What To Watch:** StockX, GOAT, Fanatics represent disruptive private companies in the sector creating value through the trading and authentication of collectibles, namely sneakers. The success of each platform is strengthened by their growing network of users while Nike, Air Jordan and Yeezy growth is affirmed. Yuga Labs and Bored Ape Yacht Club are disrupting Web3 and NFTs. We are monitoring our companies' ability to create cohesive narratives that define their brand so that they can engage a larger community of users. In our view these companies are unlikely to be takeout candidates given their internal confidence in their future growth and strong positions in their core markets.

**Stock Conclusions:** While the macro environment (FX, supply chain, geo-politics and inflation is unlike anything we have seen in prior cycles), Nike and Jordan's brand heat, distribution model (e-com expanding from \$11B to \$32B) and ROIC have never been higher. We model EPS potential for Nike at \$6.76 by FY26, ROIC reaching 47%.

We see multi-year upside in shares of Nike. As we look into Nike's five-year earnings potential and valuation scenarios the stock has a potential upside scenario to reach \$209 if it reverts to its three-year average FY2 P/E multiple (31x) and an upside scenario to reach \$189 if it holds its five-year average P/E multiple (28x). Our view is that growth, returns on capital and risk are the primary determinant of a company's valuation multiples and that Nike's mid-teens EPS CAGR potential and higher ROIC through digital mix shifts should afford the company a higher valuation multiple.

The luxury sector was slow to adopt online sales given misgivings around how the luxury shopper interacts with brands. Increased adoption and interest into digital assets are paramount for luxury brands to reengage with online platforms. LVMH, GOOS, and BRLT are positioned to take advantage of the virtual world and blockchain technology through Utility and Art & Collectible format NFTs.

#### **The Case For Sneakers (And NFTs) As An Alternative Asset Class As Public Equities and Bonds Fall In Unison**

We are more confident in the idea that sneakers are continuing their path as an alternative asset class that can be bought and sold for both collection, price appreciation and investment. With a growing base of passionate investors, growing sources of supply and authentication, sneakers **1) earn illiquidity premiums; 2) provide diversification - non-correlated with traditional asset classes; and 3) earn favorable risk-reward characteristics.** The design and creative capabilities of Nike, Jordan Brand, and Yeezy are the driving force in the concept of sneakers as an alternative asset as the sneaker resale market scales.

#### **A Decentralized Creator Economy Is Inflecting - Intellectual Property As An Alternative Asset Class**

NFTs (through their many forms including art, sneakers, clothes, collectibles, baseball cards, music, etc) will empower, compensate and make clear distinctions between owners and creators of intellectual property. Web3 monetization will include a variety of crypto currencies and NFTs - NFTs will act as a direct to consumer tool for IP (Intellectual property) providers. Web3 will remove a great deal of friction between creators and their ability to monetize their IP without interference from larger legacy technology platforms (Web2) and this could have many consequences for Consumer/Retail ecosystems. The sharing and selling of content will accelerate across consumer categories. Fans of brands will become active participants in the creation of assets and all parties can have links to financial success of each asset as communities can be incentivized through tokens and ownership. In the



new creator economy it will be easier to capture ownership, sell subscriptions, monetize content and define, monetize and extend intellectual property in the digital world. Web3 and NFTs will lower the barriers of entry to content creation, monetization and ownership. Creators of digital content/NFTs will be aligned with their consumers and communities. Cryptocurrency will be the currency of Web3.

### **Our Work On NFTs Within Retail Shows Several Scaling Platforms And Technologies And A Large TAM**

NFTs are forms of intellectual property and IP is an alternative asset class that can be extended into many verticals and forms of content that ultimately earn financial returns. We concede the NFT market remains in its infancy with copyright issues and speculative behavior. We assess the primary use cases for marketing strategies with consumer brands, as well as risks to our thesis. Leaning into NFTs as utility for customer loyalty and membership or collectibles through digitization of personas will be the primary vehicles of NFT integration strategy. A look at the rapidly changing NFT market dynamic reveals that Ethereum is largely the blockchain of choice and OpenSea's user-friendly interface draws in a majority of the buying and selling market share. While the average price of an NFT has dropped to levels of early 2021, transactions per day volume remains above January 2021 records. Major risks on execution relate to security, trust, and fees. Our profile of Nike's MNLTH and Bored Ape Yacht Club suggests there will be additional intellectual property that can scale.

### **NFTs and Gaming (Doug Creutz)**

In our view though, as far as video games are concerned, NFTs are a solution for a problem that doesn't exist, and at that a solution with many serious problems. We don't expect NFTs to ever have a meaningful impact on the games-for-entertainment segment of the business; at most, we think NFTs will sit in a niche of the market that is gamified speculation. Generally speaking, excitement about the marriage of crypto and gaming has come from crypto believers and not gamers. While some company managements have expressed significant interest in NFTs and have begun investing in them (Ubisoft and Square Enix being probably the two most prominent examples), very few within the gaming community have responded with enthusiasm.



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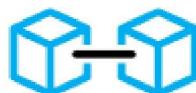


## AHEAD OF THE CURVE SERIES® KEY REPORT TAKEAWAYS



## KEY REPORT TAKEAWAYS

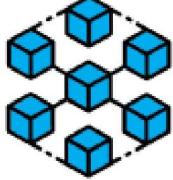


	KEY REPORT TAKEAWAYS
Macro 	<p>Our data suggests Sneaker Resale (which is dominated by Nike, Jordan and Yeezy) is likely growing 30% to 40% y/y in 2022 on top of ~100%+ growth since 2020. We note the Search trends and traffic at the leading Sneaker Resale sites (StockX and GOAT) are maintaining their strength as broader e-commerce revenues decline on difficult pandemic comparisons.</p>
Sneaker Resale TAM 	<p>We see prospects for the U.S. sneaker resale market to grow to more than \$10.5B through 2030E, reflecting a +16% 10-year CAGR, driven by continued innovation and tight supply in the primary market, rising user bases and durability of Nike, Air Jordan and Yeezy growth. We model the International Sneaker Resale market to reach \$19.5B by FY30 which reaffirms our previous forecast that the global market can reach \$30B by FY30. Luxury streetwear brands entering the market could boost overall growth.</p>
The Disruptors 	<p>Within this report we profile several private companies with robust growth into 2022 including StockX, GOAT, Fanatics and Yuga Labs all of which are creating new services, products, markets and building networks of loyal users.</p>
Nike 	<p>Nike and Jordan's brand heat, distribution model (e-com expanding from \$11B to \$36B) and ROIC suggest the company's valuation can expand while EPS can grow at a high-teens CAGR. We model EPS potential for Nike at \$6.76 by FY26, ROIC reaching 47%.</p>
Blockchain 	<p>The ability to create and link physical assets on the blockchain has enormous potential for ownership, monetization, engagement, community building, content creation, event unlocking and capturing royalties on potentially billions of dollars of resale transactions.</p>

Source: Cowen and Company



## AHEAD OF THE CURVE SERIES® KEY REPORT TAKEAWAYS

<b>NFT And Web3</b> 	NFTs can exhibit significant volatility and intrinsic value is challenging to calculate but our work suggests user engagement with NFTs is likely higher than consensus understands. 27% of Men age 18-34 have purchased an NFT, while 33% of the same cohort (Men age 18-34) have purchased something in a virtual world, these metrics likely have meaningful upside as Web3 develops.
<b>Digital Assets</b> 	We assess the primary use cases of NFTs for marketing strategies with consumer brands, as well as risks to our thesis. Leaning into NFTs as utility for customer loyalty and membership or collectibles through digitization of personas will be the primary vehicles of NFT integration strategy
<b>Luxury</b> 	Increased adoption and interest into digital assets are paramount for luxury brands to reengage with online platforms. LVMH, GOOS, and BRLT are positioned to take advantage of the virtual world and blockchain technology through Utility and Art & Collectible format NFTs
<b>Alternative Asset Classes</b> 	With a growing base of passionate investors, growing sources of supply and authentication, sneakers 1) earn illiquidity premiums; 2) provide diversification - non-correlated with traditional asset classes; and 3) earn favorable risk-reward characteristics. We see parallels between Sneaker Resale and NFTs and other forms of intellectual property that will be created, owned and traded on the Blockchain.
<b>Gaming</b> 	We don't expect NFTs to ever have a meaningful impact on the games-for-entertainment segment of the business; at most, we think NFTs will sit in a niche of the market that is gamified speculation.

Source: Cowen and Company



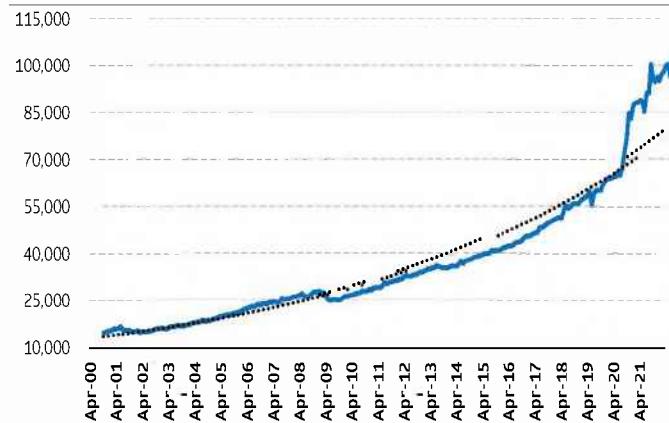
## Traffic To Digital Platforms And Marketplaces Has Sustained Growth Amid A Broader Macro Slowdown In E-commerce

In April 2019 we published our inaugural report, ["Sneakers As An Alternative Asset Class: Ahead of The Curve + Video,"](#) followed by a second report in July 2020, ["Sneakers As An Alternative Asset Class, Part II: Ahead Of The Curve + Video,"](#) which centered on the explosive growth within the sneaker and streetwear secondary market (estimated market sizing \$30B globally in FY20), outlining the key players such as privately-held StockX and GOAT Group, and framing the role the secondary market plays in relationship to the primary market and the sneaker brands such as Nike, Jordan and adidas. By our rough estimates of third-party data and interviews with channel participants, we estimate the sneaker resale market is at least north of \$4 billion in N. America on a GMV basis, growing in a range of +20% to +40% y/y on top of 100%+ growth since 2020. StockX, has generated \$3.8B in lifetime GMV (as of 2021) and averages over 30MM average monthly visitors to its site.

### Inbound Data Points To Strength

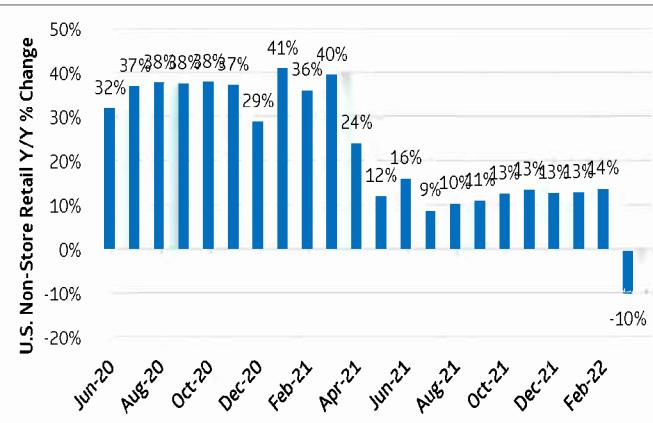
We analyze both Google Search volume and Similarweb website traffic levels to observe engagement in the digital space among sneaker secondary market providers. To normalize calendar shifts and weekly volatility, we examine the year over year change of relative Google Search trends across our industry on a trailing four-week basis. Google Search growth for a specific concept is benchmarked to "Total Google Searches" - which are likely growing at a significant pace. These results could be impacted by the rise in other Google searches, but these providers are in the same environment, relatively speaking, creating an equal playing field when analyzing accelerating and decelerating trends. We note the Search trends and traffic at the leading sneaker resale sites are maintaining their strength as broader e-commerce revenues decline on difficult pandemic comparisons. We detail Non-Store Retail Sales as measured by the Census Bureau below.

**Figure 1 Non-Store Retail Sales (Ecommerce) Is Now Well Above Trend Line But Slowing On Difficult Comparisons**



Source: Cowen and Company, Census Bureau

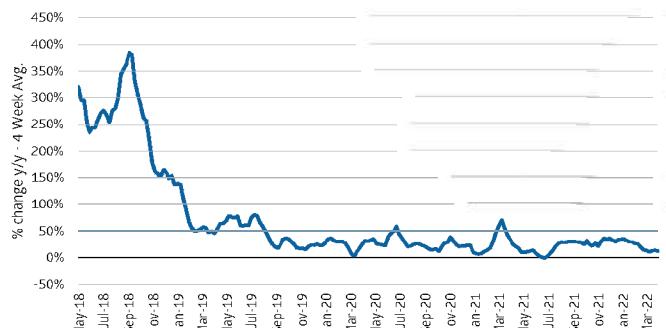
**Figure 2 Non-Store Retail Sales Declined 10% Y/Y In March 2022 On Tough Comparisons**



In the case of StockX, Google Search volume grew +12% y/y on a four-week average basis through April 24, 2022, on top of +35% in the year ago period. Beyond the near

 term, Google Search volume for StockX increased in the triple digits from 2017 through 2018 and has trended in the double-digit growth range for much of that time since.

Figure 3 StockX Google Search Trend – Four-Week Average (Y/Y%)



Source: Google, Cowen and Company

Figure 4 StockX Google Search Trend – 13-Week Average (Y/Y%)

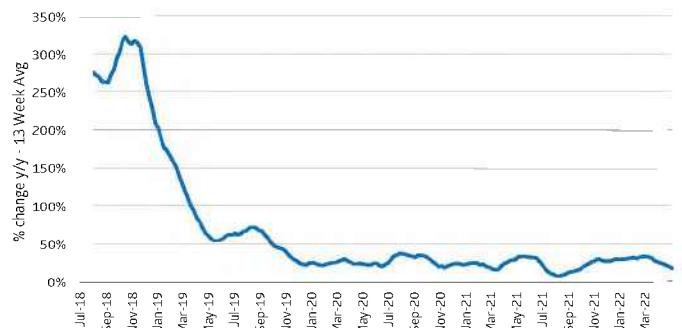
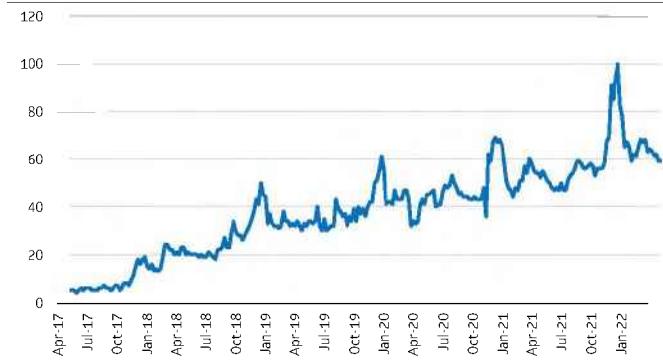
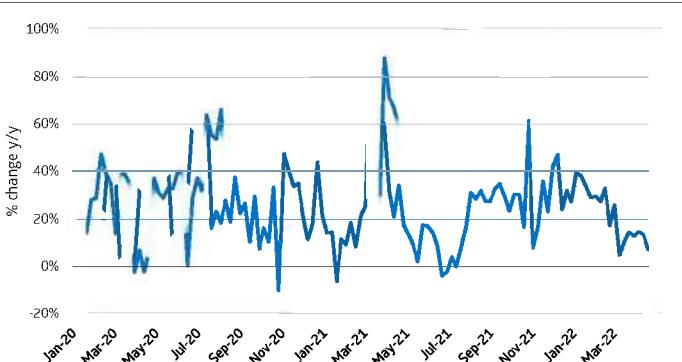


Figure 5 Peak Search In StockX Occurred In December 2021 – Significant Growth In Holiday 2021



Source: Google, Cowen and Company

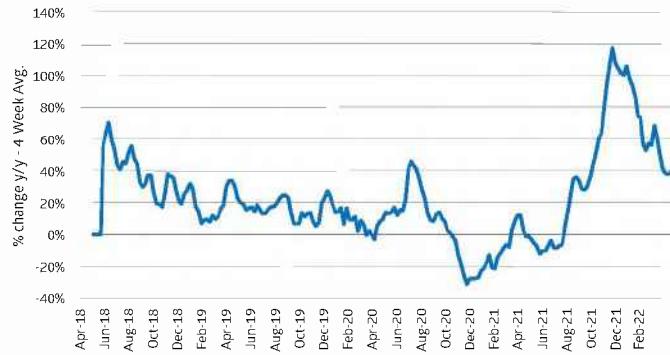
Figure 6 COVID-19 Pandemic Hardly Disrupted StockX Google Search Profile (Y/Y%)



GOAT (platform) Google Search volume grew +40% y/y on a four-week average basis through April 24, 2022, running up double-to-triple digits since July 2021. Strong search interest in GOAT supports platform resonance with consumers in the secondary sneaker market, international expansion, and the expansion into luxury fashion.



Figure 7 GOAT Google Search Trend – Four-Week Average (Y/Y%)



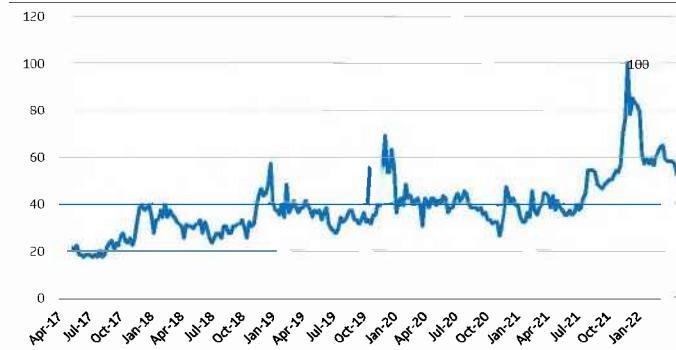
Source: Google, Cowen and Company

Figure 8 GOAT Google Search Trend – 13-Week Average (Y/Y%)



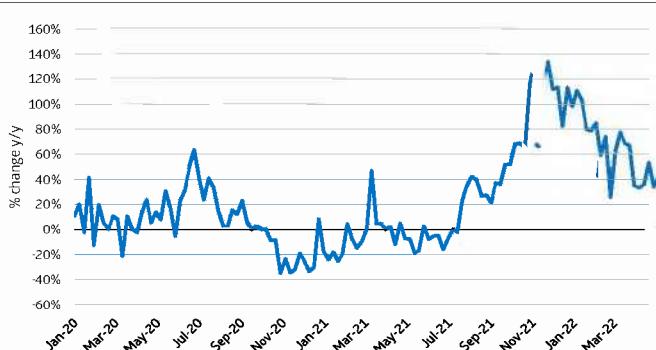
Figure 9 Peak Search In GOAT Occurred In Mid-December 2021 – Significant

Growth In Holiday 2021



Source: Google, Cowen and Company

Figure 10 COVID-19 Had Modest Disruption On GOAT Google Search Profile (Y/Y%)

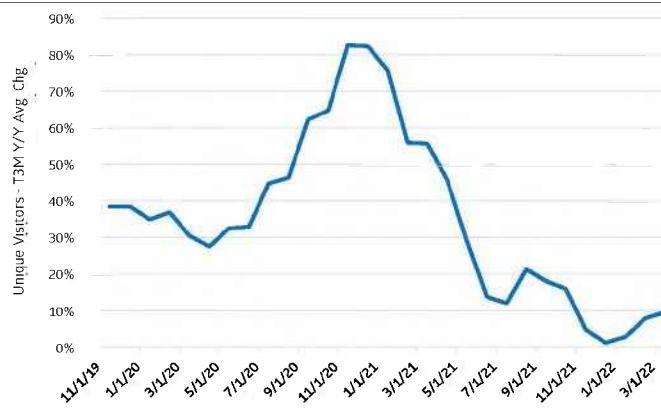


### Similarweb Trends – StockX And GOAT Resonating Here

We also look at web traffic as measured by Similarweb on a trailing three-month basis to normalize monthly volatility in both desktop and mobile visitors. StockX.com total unique visitors increased +10% y/y on a three-month average basis for March 2022, down from a peak of +83% in November 2020. The pace of this growth in March 2022 surpasses that of Nike.com which grew +2.2% YTD in 2022, total unique visitors for StockX.com grew +3% y/y on a three-month average basis in January 2022, +8% in February 2022, +10% in March 2022, representing a consistent recovery in trend from +1% in December 2021. On average, StockX.com total unique visitors increased +29% in 2021.

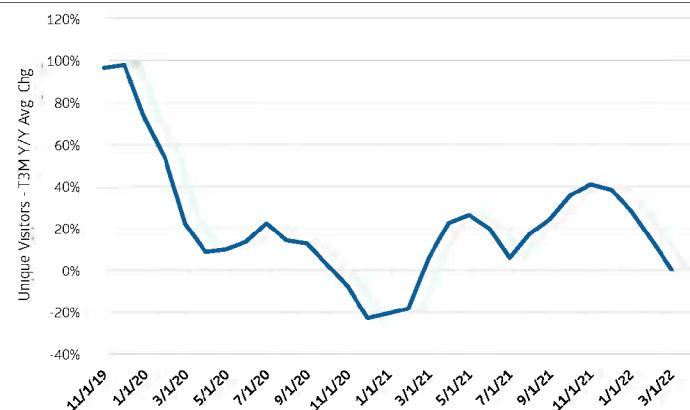
GOAT.com total unique visitors increased +1% y/y on a three-month average basis for March 2022, down from the double-digit growth of +15% in February 2022 and +29% in January 2022. This deceleration in growth in March 2022 trailed that of StockX.com which grew +10% as noted above. YTD in 2022, total unique visitors for GOAT.com grew +18% y/y on a three-month average basis, roughly in line with the average increase of +17% in 2021.

Figure 11 StockX.com Similarweb Total Unique Visitors Traffic

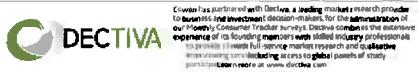


Year over year change of three-month moving average in total average unique visitors via desktop and mobile. Source: Similarweb, Cowen and Company

Figure 12 GOAT.com Similarweb Total Unique Visitors Traffic



## Secondary Market Resale Is Still Scaling With Gen Z

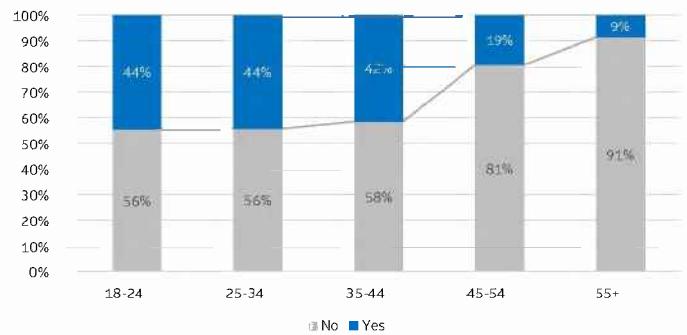


As part of our annual Millennial and Gen Z survey, we asked 2,700 U.S. U.S. adult survey participants in July 2021 if they purchased apparel, footwear or accessories secondhand using a resale online marketplace in the last 30 days. The highest number of "Yes" responses were found among Millennials and Gen Z at 44%. The level of "Yes" responses among Millennials and Gen Z participants in 2021 represents an increase of +33% y/y from the 2020 survey for both cohorts and +69% and 57%, respectively, over the 2019 survey.

The network effects of leading the Sneaker and Streetwear marketplace are significant and more users/community participating in the market creating more trading, more hype/storytelling around product launches and enabling brands to create customized, limited-edition product at premium prices and high sell-throughs. This ultimately can return momentum to the primary market sell-through for brands depending upon brand heat in the secondary market.

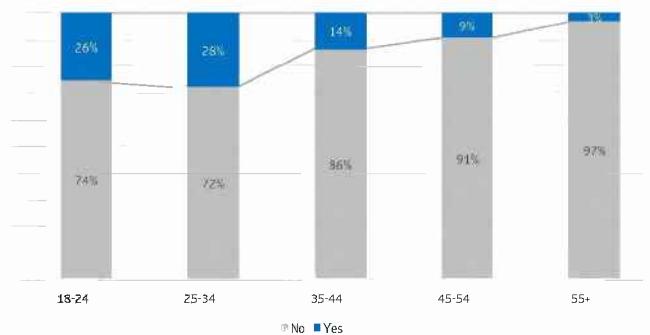


**Figure 13 Over The Last 30 Days, Did You Buy Apparel, Footwear Or Accessories Secondhand Using A Resale Online Marketplace (e.g. thredUP, Poshmark, Tradesy, The RealReal, Depop, StockX)? – 2021**



Source: Cowen Millennial Tracker Survey, n=2700 for total population, July 2021

**Figure 14 Over The Last 30 Days, Did You Buy Apparel, Footwear Or Accessories Secondhand Using A Resale Online Marketplace (e.g. thredUP, Poshmark, Tradesy, The RealReal, Depop, StockX)? – 2019**



Source: Cowen Millennial Tracker Survey, n=2700 for total population, June 2019

When shopping for resale apparel, footwear or accessories, Poshmark (POSH-Oliver Chen), StockX and GOAT were ranked highest among Millennials and Gen Z based on our proprietary 2021 survey data, with 39% of 18-24 year olds and 41% of 25-34 year olds citing Poshmark. StockX garnered a 27% share of 18-24 year olds in 2021 and 26% of 25-34 year olds while GOAT represented 23% of 18-24 year olds and 25-34 year olds. The RealReal reached 24% of 25-34 year olds in 2021.

### StockX and GOAT Are Powerful Marketplaces Across Multiple Categories

StockX and GOAT registering so highly among Millennials and Gen Z may be aided by their multiple category silos which, for StockX, includes streetwear, sneakers, handbags, watches, consumer electronics, collectibles and now NFTs. GOAT self describes as a leading and differentiated luxury and lifestyle brand at the intersection of the primary/secondary market, with roughly 80% of its 40MM community members consisting of Gen Z and Millennials. While starting out in the secondary market, GOAT now extends to the primary market through luxury in an asset light way and has created impactful collaborations with many luxury brands.

We are more confident in the idea that sneakers are continuing their path as an alternative asset class that can be bought and sold for both collection, price appreciation and investment. With a growing base of passionate investors, growing sources of supply and authentication, sneakers **1) earn illiquidity premiums; 2) provide diversification - non-correlated with traditional asset classes; and 3) earn favorable risk-reward characteristics**. The design and creative capabilities of Nike, Jordan Brand, and Yeezy are the driving force in the concept of sneakers as an alternative asset as the sneaker resale market scales.

Figure 15 Top Sellers And Most Valuable SKUs on StockX

**Sneakers - Most Popular Last 72 Hours**

Rank	Brand	Style	Number of Sales
1	Jordan	Jordan 4 Retro Military Black	4,865
2	adidas Yeezy	adidas Yeezy Slide Pure (Restock Pair)	3,438
3	adidas Yeezy	adidas Yeezy Slide Onyx	2,270
4	Jordan	Jordan 4 Retro Military Black (GS)	1,963
5	Nike	Nike Dunk Low Retro White Black Panda (2021)	1,561
6	adidas Yeezy	adidas Yeezy Slide Glow Green (2022) (Restock)	1,393
7	Nike	Nike Air Force 1 Low '07 White	1,226
8	Jordan	Jordan 11 Retro Low 72-10	690
9	Nike	Nike Dunk Low Retro White Black (GS)	665
10	Jordan	Jordan 1 Retro High OG Stage Haze	600

**Sneakers - Total Sold Last 12 Months**

Rank	Brand	Style	Number of Sales
1	Nike	Nike Air Force 1 Low '07 White	157,230
2	Nike	Nike Dunk Low Retro White Black Panda (2021)	127,328
3	Jordan	Jordan 11 Retro Cool Grey (2021)	113,942
4	Jordan	Jordan 4 Retro Lightning (2021)	61,988
5	Nike	Nike Dunk Low Retro White Black (2021) (W)	60,240
6	Jordan	Jordan 1 Retro High OG Patented Bred	57,437
7	adidas Yeezy	adidas Yeezy Slide Pure (First Release)	56,204
8	Nike	Nike Air Force 1 Low Supreme White	53,603
9	Nike	Nike Dunk Low Tretro White Black (GS)	53,476
10	adidas Yeezy	adidas Yeezy Slide Ochre	49,663

**Sneakers - Average Sale Price Last 12 Months**

Rank	Brand	Style	Avg. Sale Price
1	Nike	Nike MAG Back to the Future (2016)	\$70,962
2	Nike	Nike Dunk SB Low Paris	\$62,000
3	Nike	Nike Dunk High Pro SB FLOM	\$56,139
4	Nike	Nike Dunk SB Low Yellow Lobster	\$42,634
5	Nike	Nike Dunk SB Low Staple NYC Pigeon	\$38,000
6	Nike	Nike Dunk SB Low Freddy Krueger	\$30,000
7	Jordan	Jordan 4 Retro Travis Scott Purple (Friends and Fam)	\$24,667
8	Jordan	Jordan 4 Retro Eminem Encore (2017)	\$24,133
9	Jordan	Jordan 1 OG Bred (1985)	\$23,466
10	Jordan	Jordan 11 Retro Premium Derek Jeter	\$23,000

Source: Cowen and Company.

The "most popular" are the products with the most sales over the past 72 hours.

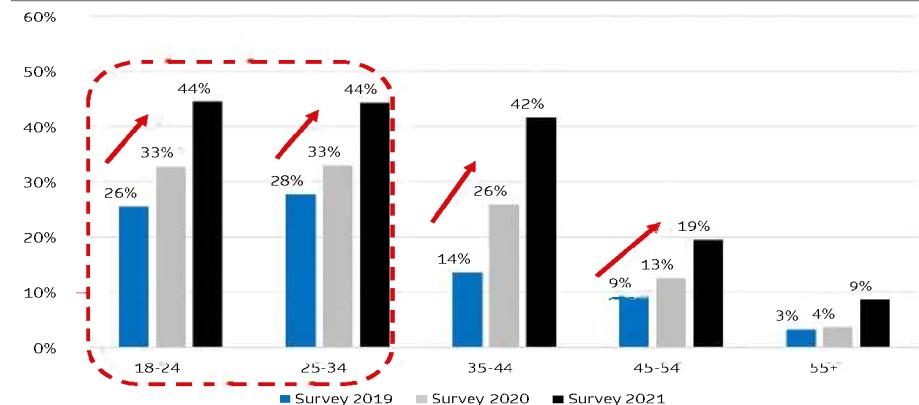
The total number of items sold over the past twelve months. StockX removes fakes, outliers, and auctions with multiple listings.

The average sales price over the past twelve months. StockX removes fakes, outliers, and auctions with multiple listings.

Source: StockX as of 5/23/22.

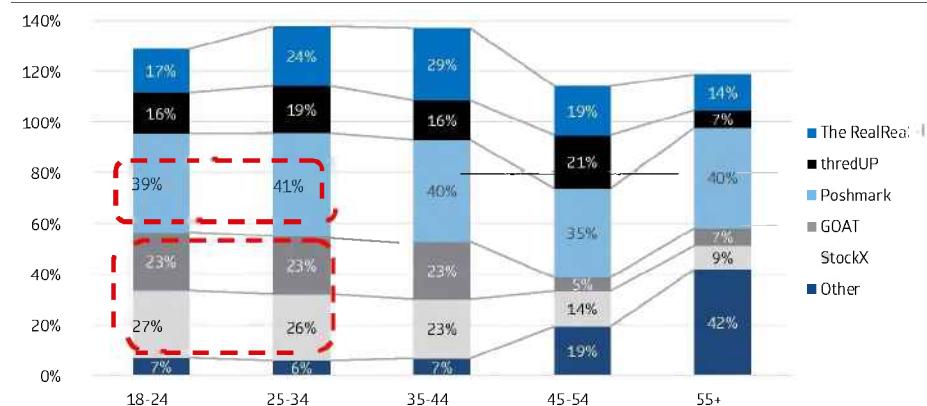


**Figure 16 "Yes" Responses Favor Millennials And Gen Z When Asked "Over The Last 30 Days, Did You Buy Apparel, Footwear Or Accessories Second Hand Using A Resale Online Marketplace (e.g. thredUP, Poshmark, GOAT, The RealReal, Depop, StockX)?"**



Source: Cowen Millennial Tracker Survey, n=2700 for total population, July 2021

**Figure 17 When Shopping For Apparel, Footwear Or Accessories Second Hand, Which Platform Did You Use? – 2021**

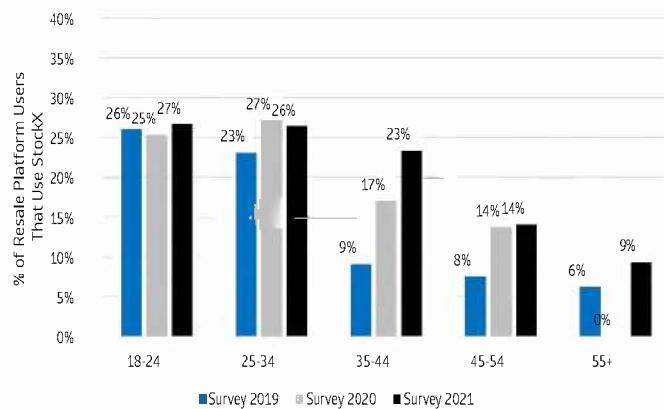


Source: Cowen Millennial Tracker Survey, n=2700 for total population, July 2021

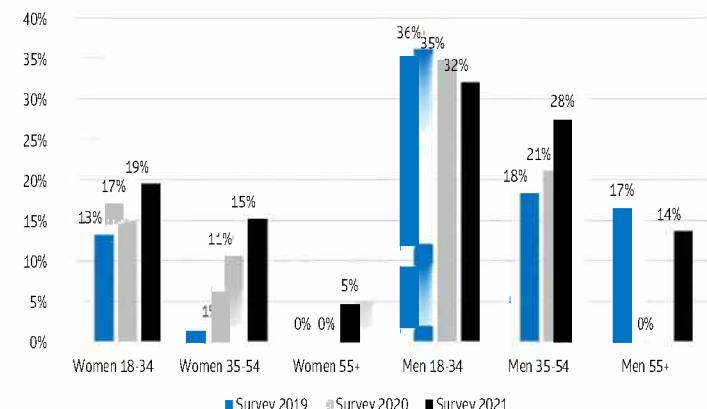
Analyzing preference for using the StockX platform (a small "N" survey sample size), our 2021 data indicated that 27% of Gen Z respondents use StockX, representing an increase over 25% at 2020 and 26% in 2019. By comparison, the preference scores for StockX increased over pre-pandemic levels (2019) among Millennials to 26% from 23%. Drilling down further within the dataset among women and men by age cohort (an even smaller "N" which can increase volatility y/y), *the use of StockX among women age 18-34 grew +48% from 2019 to 19% in 2021. Men age 18-34 decreased (11%) from 2019 to 32% in 2021 which is still the highest penetration rate among the age groups using the StockX platform.*



**Figure 18 StockX Platform Users Are Highest Among Gen Z & Millennials, Rising Over Pre-Pandemic Levels**



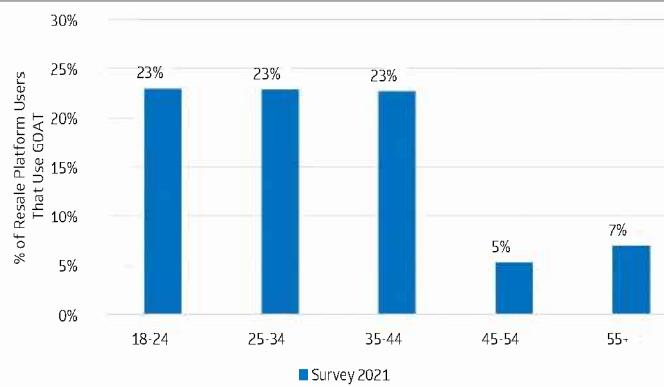
**Figure 19 StockX Platform Users Among Men And Women By Age Group**



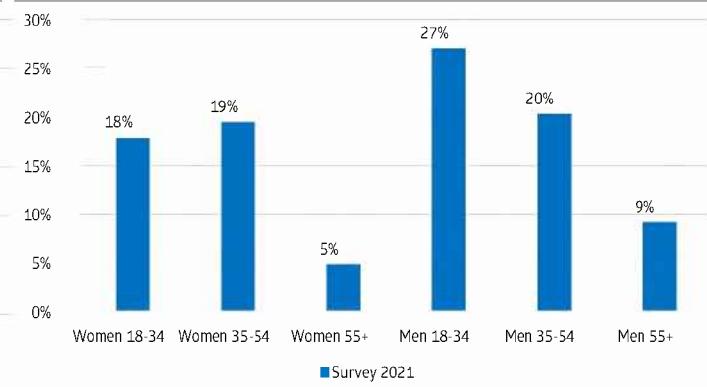
Source: Cowen Millennial Tracker Survey, n=2700 for total population, July 2021

Our 2021 data for GOAT indicates that 23% of Gen Z and Millennials use its platform when shopping for apparel, footwear and accessories on a resale platform. Note, the N is a small sample size here too which can increase volatility of results. Drilling down further within the dataset for 2021 among women and men, *the use of GOAT's platform is highest among men age 18-34 at 27%, followed by 20% for men 35-54, 19% for women 35-54 and 18% for women 18-34.*

**Figure 20 GOAT Platform Users Also Rank Highly And Uniformly Among Millennials & Gen Z**



**Figure 21 GOAT Platform Users Among Men And Women By Age Group**



Source: Cowen Millennial Tracker Survey, n=2700 for total population, July 2021

Note: GOAT was added to the list of platform choices for the first time in the 2021 survey.

### Powerful Level of Frequency

Turning to our more recent monthly Cowen Consumer Tracker survey for data pertaining to the usage of resale sites to purchase clothing & accessories and to determine which channels resale is drawing share from. The data indicates a propensity among Gen Z and Millennials to shop resale sites with a good deal of regular frequency. When asking Men age 18-34 "how often do you purchase apparel, footwear and accessories second hand on a resale website?" the highest response was "Daily" at 29%,



followed by 22% for "Several times per week" and 21% for "Once per week." Among Women age 18-34, 20% cited "Several times per week", followed by 17% for "Once per week" and "Once every other week."

Figure 22 Resale Frequency For Apparel & Footwear – Men 18-34

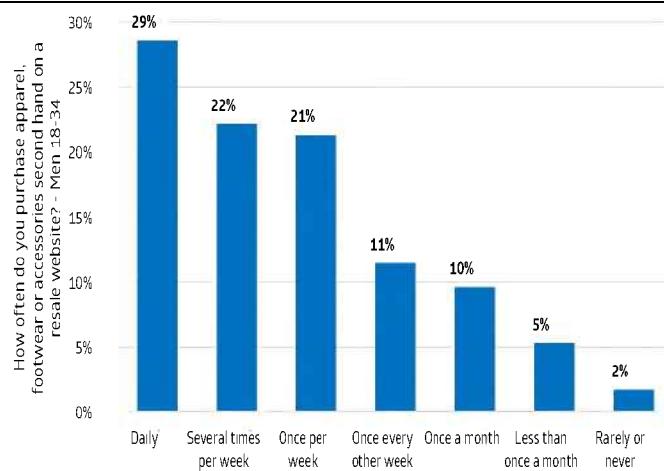
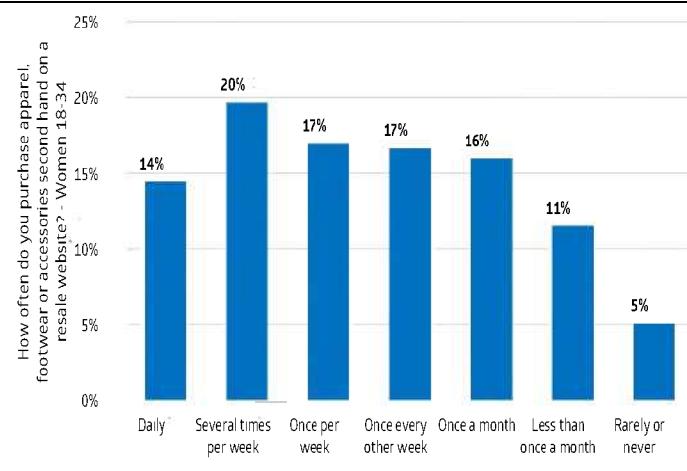


Figure 23 Resale Frequency For Apparel & Footwear – Men 18-34



Source: Cowen Consumer Tracker Survey, n=107 for Men 18-34 and n=70 for Women 18-34, February 2022

### Addressable Market For Sneaker Resale Is Expanding – Luxury Brands Are Now Participating

The resale market is growing exponentially faster than the primary market as both units and ASP growth are fueling a rise in the category - with Nike, Air Jordan and Yeezy accounting for 80% to 90%+ of this market – with brands like New Balance emerging and luxury brands such as Balenciaga, Dior, Alexander McQueen, GUCCI, Common Projects, Off-White and Louis Vuitton gaining share.

The channel in general is more challenging to analyze than POS data such as those from NPD which does not account for the resale market and the loyalty that resale's network of users is building. Our industry checks and data indicate that StockX has more than 30MM global visits to its platform per month and GOAT has roughly 8MM visits to its site each month, far greater than most of their sneaker reseller peers. Ultimately, dollars going to resale are shifting away from primary markets such as Foot Locker, JD Sports and Finish Line.

Figure 24 Cowen's Estimated 2020/2021 Sneaker Resale Within The Global Sneakerverse (Values Are Estimated)



Source: Cowen and Company, Company Reports

#### Network Effects Of More Users, More Demand and More Supply

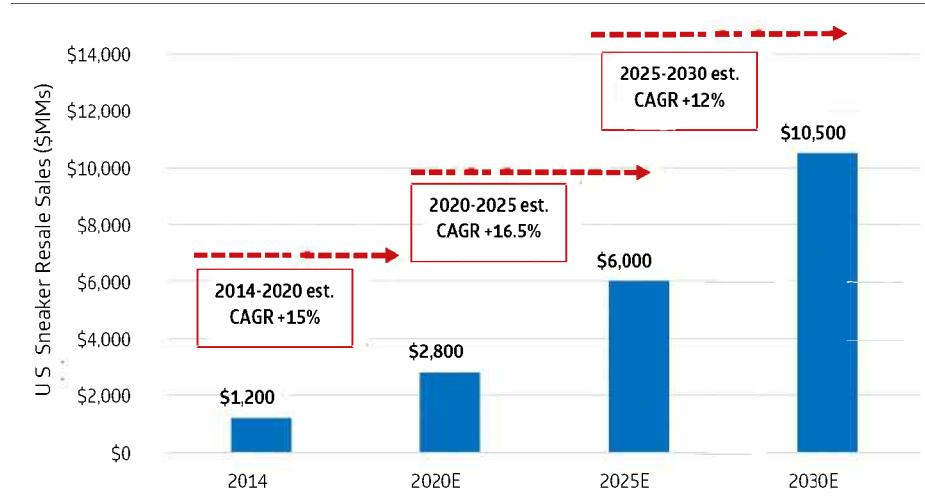
The growth of the market can be fueled by **1) new users, 2) ASP growth, 3) increasingly differentiated product by Nike, Jordan, Yeezy and others 4) data aggregation, and 4) the extensive vault** that key brands maintain of existing franchises. In some cases, like Nike Air and Jordan franchises, key franchises from the early 1990s are growing increasingly valuable as they age.

**We estimate that the U.S. sneaker resale market grows at a +16.5% sales CAGR between 2020-2025E from a base of approximately \$2.8B in 2020.**

Within our global forecast, we see prospects for the U.S. sneaker resale market to grow to more than \$10.5B through 2030E, reflecting a +16% 10-year CAGR, driven by continued innovation and tight supply in the primary market, rising user base, along with deep product archives among certain brands from which to draw from and reissue, that leads to ongoing demand among current sneaker resale buyers and new buyers. Luxury streetwear brands entering the market could boost overall growth.



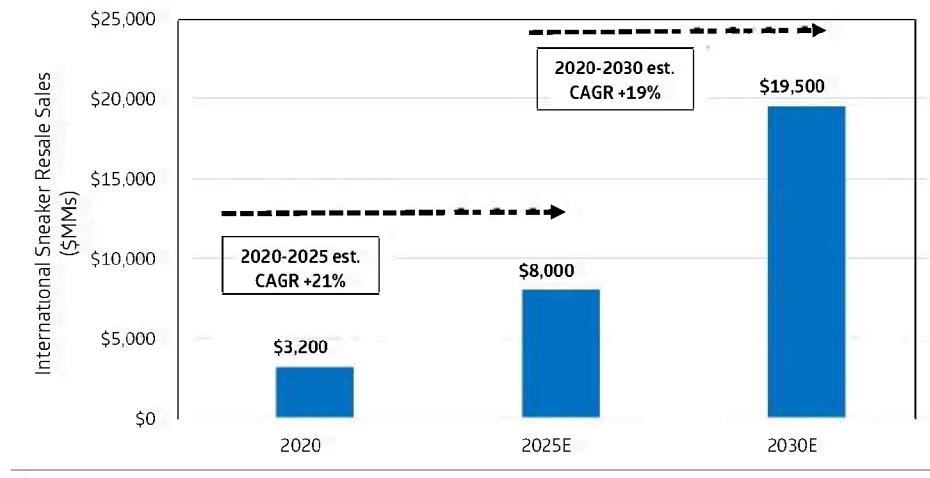
Figure 25 Domestic Sneaker Resale Market – We Assume The Market Can Reach \$6B By FY25



Source: Cowen and Company

Key international markets exhibiting above-average growth in sneaker resale, according to StockX's State of Resale report, include China, France, Germany, Italy, Japan, Netherlands, Qatar, South Korea, Spain and the UK. The large players such as StockX, GOAT and Stadium Goods have international presence. StockX has authentication centers in London and the Netherlands, with future centers expected for Toronto, Canada, and in Japan and Hong Kong. Further, the company's patented "All in Ask," which includes shipping, duties and customs, provides access and transparency to global and local supply, a key point of differentiation vs. peers, and is driving a lot of conversion and volume for StockX internationally. This is a "playbook" StockX intends to use as it unlocks new markets, in addition to opening additional authentication centers. We see the international sneaker resale market, collectively, supporting a sales CAGR of +19% between 2020-2030E as the secondary market for sneakers continues to grow in awareness and scope. We model the international sneaker resale market to reach \$19.5B by FY30 which reaffirms our previous forecast that the global market can reach \$30B by FY30.

Figure 26 International Sneaker Resale Market Can Reach \$19.5B By FY30



Source: Cowen and Company

Figure 27 Cowen Global Sneaker Resale Composition (Estimated)



Source: Cowen and Company

### Investment Interest In Resale Marketplaces Remains High

**StockX's latest funding round valued the company at \$3.8B in April 2021, while GOAT was valued at \$3.7B in its June 2021 funding round**

Further supporting sector growth forecasts is the continued funding by outside investment groups. StockX investors have reportedly grown to include several bold-faced names in the entertainment and corporate world. According to Crunchbase, to date StockX is reported to have raised at least \$690.2MM million, with the most recent funding including a \$195MM Series E-1 secondary market funding round in April 2021 and led by Altimeter Capital. Capital is expected to be deployed towards further scaling international and vertical growth along with enhancing services. In Sept. 2021, GOAT Group, among other investors, invested \$60MM in a Series B funding round for Grailed. We detail key funding rounds among rapidly growing companies across resale verticals in the table below. **StockX's latest funding round valued the company at \$3.8B in April 2021, while GOAT was valued at \$3.7B in its June 2021 funding round.**



Figure 28 Funding Activity Ramped In The Past Several Years In Resale Marketplaces

Marketplace	Total Funding Amount (\$MMs)	Characterization	Lead Investors	Total Number of Investors
<b>StockX</b>				
4/8/2021	\$195.0	Secondary Market	Altimeter Capital, Dragoneer Investment Group	2
4/8/2021	\$60.0	Series E-1	Altimeter Capital	2
12/16/2020	\$275.0	Series E	Tiger Global Management	4
6/30/2020	NA	Series D	Marcy Venture Partners	2
9/23/2019	\$0.227	Venture Round	GGV Capital	1
6/26/2019	\$110.0	Series C	DST Global, General Atlantic, GGV Capital	3
9/13/2018	\$44.0	Series B	Battery Ventures, GV	11
1/1/2018	NA	Seed Round	NA	NA
2/15/2017	\$6.0	Series A	NA	6
11/1/2016	NA	Seed Round	NA	NA
10/31/2022	NA	Series A	SV Angel	NA
<b>Total Funding</b>	<b>\$690.2</b>			<b>27</b>
<b>GOAT Group</b>				
6/24/2021	\$195.0	Series F	Park West Asset Mgmt., funds and accounts advised by T. Rowe Price, Franklin Templeton, Adage Capital, Ulysses Mgmt.	5
1/19/2021	NA	Corporate Round	Groupe Artémis (Controlling shareholder of Kering)	1
9/23/2020	\$100.0	Series E	D1 Capital Partners	1
2/7/2019	\$100.0	Series D	Foot Locker	1
2/8/2018	\$60.0	Series C	Index Ventures	6
2/8/2018	NA	Merger	Flight Club	1
2/7/2017	\$25.0	Series B	Accel	5
8/29/2016	\$5.0	Series A	Matrix Partners	4
6/15/2012	\$6.0	Seed Round	NA	3
5/1/2011	\$1.6	Angel/Seed Round	NA	16
<b>Total Funding</b>	<b>\$492.6</b>			<b>32</b>
<b>Poison</b>				
6/27/2019	NA	Series B	DST Global	1
4/29/2018	"Tens of Millions"	Series A	Sequoia Capital China	3
<b>Total Funding</b>	<b>NA</b>			<b>4</b>
<b>Yeezy</b>				
9/16/2021	\$60.0	Series B	GOAT Group	5
6/21/2018	\$15.0	Series A	Index Ventures	3
5/1/2014	\$1.5	Seed Round	Thrive Capital	1
<b>Total Funding</b>	<b>\$76.5</b>			<b>6</b>

Source: Crunchbase.com, TechinAsia 4/30/19 article "Chinese Sneaker-Trading Platform Becomes Unicorn With Latest Funding Round." Cowen and Company

Figure 29 Valuations In The Private Sector Around Sneaker Resale and NFTs

Company	Private Market Valuation (\$Bs)	Date of Last Raise
StockX	\$3.8	4/7/2021
GOAT	\$3.7	6/27/2021
Fanatics	\$27.0	3/2/2022
Yuga Labs	\$4.0	3/22/2022
OpenSea	\$13.3	1/5/2022

Source: Cowen and Company, Crunchbase



### Why Resale Is Important For Investors – It Creates A Big Halo For Nike/ Jordan, Adidas And Validates Durability

We believe the secondary or resale market for sneakers and streetwear continues to scale at a robust pace y/y, fueled by lean inventory from major sneaker brands (even without supply chain disruption), consistent drops of new releases, deep sneaker archives from which to draw from for future releases, an endless aisle, a community of like-minded enthusiasts and digital marketplaces that offer transparency and ease of use.

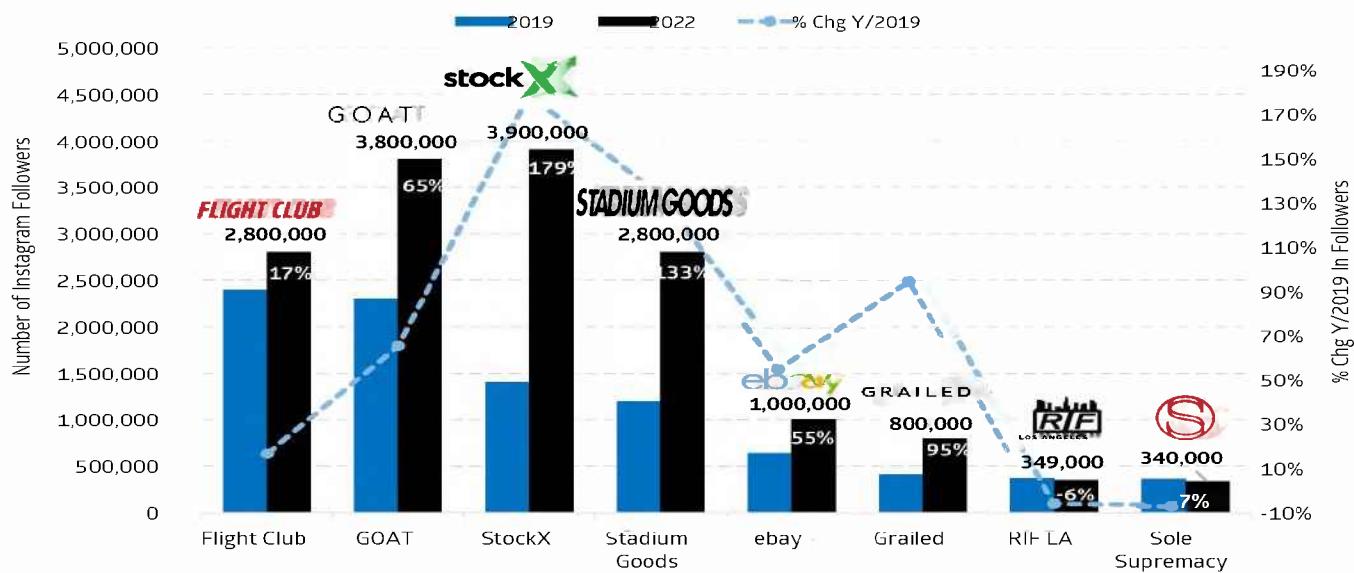
This market is important to understand because of the dynamics of distribution - a mobile led ecosystem fueled by **1) Network Effects** from loyal users, data, community and brand loyalty, **2) New Products and Services** are emerging, growth of the market will generate value creating opportunities for Nike and Jordan Brand and others (Yeezy, New Balance, Vans), and **3) Economics are favorable for the marketplaces** (StockX, GOAT) as take rates and AOVs are high relative to other global marketplaces.

With the emergence of several leading marketplace sites/apps devoted to the category over the past decade, it has garnered a devoted following of "sneakerheads," supported by high social media engagement and community. We recognize that there are several marketplaces, large and small globally, that are available for the resale of goods but for the purposes of this report we are focusing on a microcosm of resellers that focus on the sneaker secondary market. We believe this self-reinforcing community of users has created low customer acquisition costs for the marketplaces with leading supply. Search engine optimization has led to improved product searches and product discovery with relatively little incremental marketing dollars.

To recap, the major U.S. players in sneaker resale are **StockX, GOAT, Stadium Goods** (FTCH, Oliver Chen and John Blackledge) and **Flight Club** and they maintain sophisticated, multi-step authentication systems to ensure that products are authentic and unworn. The trust in the market is critical to the overall user experience. For example, Stadium Goods reportedly has a 10-point verification system, and StockX trains its sneaker authenticators during a 90-day period. This is in stark contrast to other resale markets that are marketplaces of used apparel, accessories and other categories. The key driving forces to this market are: **1) the weekly sneaker drops by the primary brands – Nike's weekly drops of new issues or re-releases; 2) community; 3) repeat purchase; and 4) digital.** The growing community of users is fueling greater interest in the category which is a positive for Nike, Jordan, Yeezy and increasingly New Balance, Vans, Puma, Under Armour and others could be longer-term beneficiaries of the market's growth.



Figure 30 Sneaker Resellers Have Developed A Large Community – Instagram Followers Grew Substantially Among The Leaders From 2019



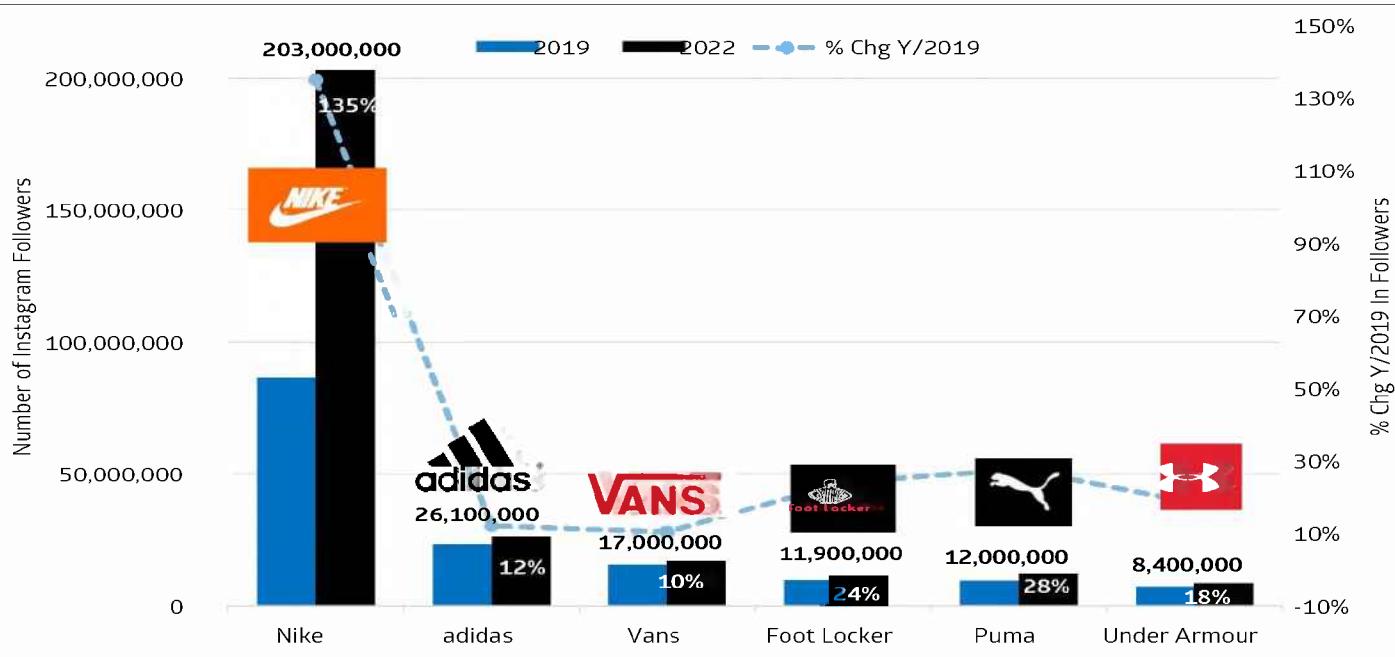
Source: Instagram as of 3/2/22 and 3/1/19, Cowen and Company

Historically, sales and profits from these secondary market transactions in sneakers didn't explicitly flow to the brands such as Nike and adidas or traditional sneaker retailers such as Foot Locker. However, they nonetheless catch a "cool factor" tailwind for their brand/retail format if supply of new launches and archival re-issues remain tightly controlled such as Nike Air Force 1, Jordan brand sneakers, Nike x Off-White collaborations, Nike x Travis Scott, and adidas Yeezy. This flow-through notion continues to evolve – recall that Foot Locker invested \$100 million in GOAT Group in 2019. Per former StockX CEO and co-founder Josh Luber at a 2019 Detroit Policy Conference, "we're the largest marketplace for sneakers, but we get to work with brands. We can become an alternate retailer."

As we noted earlier in this report, there are signs that this lack of revenue sharing may be disrupted in the future with the advent of Web3 and the metaverse. NFTs provide a potential royalty and fee structure for the creator and their intellectual property.

**In early February 2022, a Reuters article reported "that Nike is suing StockX "for selling unauthorized images of Nike shoes," and that "StockX's NFTs infringe its trademarks."**  
 Nike is requesting "unspecified money damages and an order blocking their sales." According to a 3/31/22 Reuters article, StockX responded in a court filing indicating "that images of Nike sneakers it sells as non-fungible tokens do not violate Nike Inc. trademarks" and that "it was only using NFTs to authenticate its physical shoes and was not selling them as standalone products." On 5/11/22, Reuters further reports ([Link](#)) that Nike filed an amended complaint in court, indicating its belief that online reseller "StockX has been offering counterfeits of its shoes." StockX responded in a statement, calling Nike's filing "baseless" according to Reuters.

Figure 31 The Primary Market Still Commands A Substantially Larger Number Of Instagram Followers Than The Secondary Sneaker Market - Feeding Reseller Interest



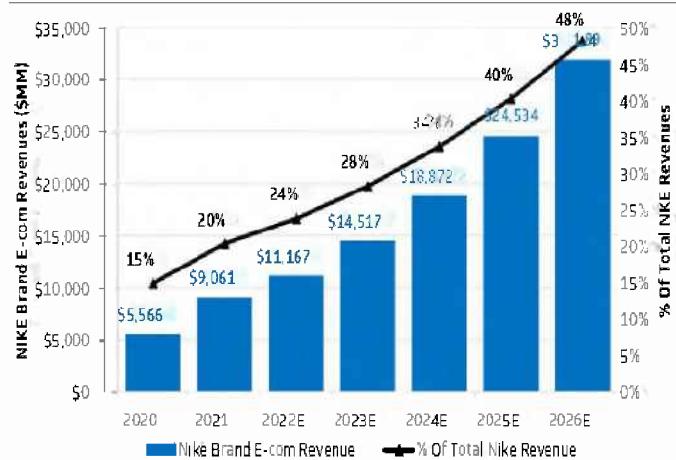
Source: Instagram as of 3/2/22 and 3/1/19, Cowen and Company

Nike management offered a long-term financial outlook when it reported its fiscal Q4:21 results back on 6/24/21, setting a revenue CAGR of high-single to low double-digits, implying a range of \$60B to \$66B in total Nike revenues or \$58B to \$62B in Nike Brand revenues by FY25. Management guided Nike Direct, which includes digital + brick & mortar, to reach 60% of its business by FY25. This penetration rate implies Nike Direct revenues reach \$37B from 37% penetration or \$16.4B in FY21, led by digital. We are modeling FY25 Direct revenues of \$33B including e-commerce revenues of \$24B, and Wholesale revenues of \$26B, growing to Direct revenues of \$37B in FY26 with e-commerce revenues of \$32B and Wholesale remaining around \$26B. Management is guiding to Wholesale revenues that are flat with FY21 at \$26B through FY25 as NKE accelerates its exit from undifferentiated Wholesale and recaptures that business through its Direct channel.

Management's targets are fueled by secular trends favoring health & wellness, digital and a return to sport, along with global market share opportunities in women's, apparel, Jordan, digital and International. The construct implies EBIT of \$12.5B at the midpoint through FY25 and expansion to a high-teens EBIT margin from 15.6% in FY21, representing an incremental \$18B in revenue and \$5.6B in EBIT over FY21 (a 30% incremental margin) and a pathway to \$6.76 in EPS potential.



Figure 32 E-Com Expansion To Fuel Rising DTC Revenue Mix At Nike



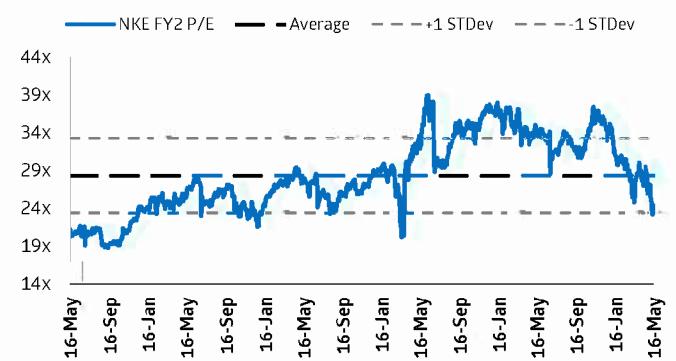
Source: Company Reports, Cowen and Company

Figure 33 We See EPS Approaching \$7 Through FY26



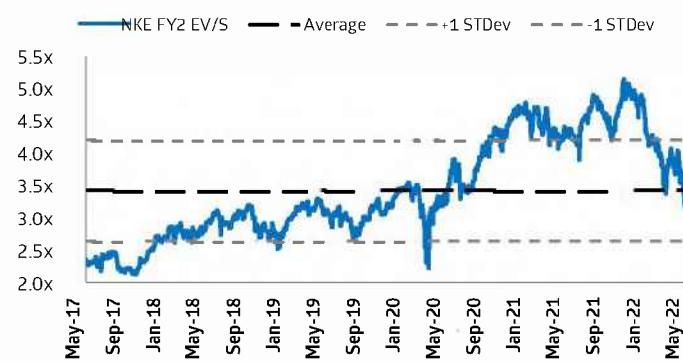
Source: Company Reports, Cowen and Company

Figure 34 NKE FY2 P/E



Source: Cowen and Company

Figure 35 NKE FY2 EV/Sales



If Nike can maintain its five-year average P/E multiple into FY26, the stock could see a potential upside scenario of \$189. If the stock can maintain its three-year average P/E multiple into FY26, the stock could reach an upside scenario potential of \$209. More importantly, given the stock's higher growth and ROIC from its mix shifts to DTC – valuation metrics should expand beyond historical averages. We model Nike e-commerce revenue to expand from \$11B in FY22E to \$32B in FY26 to 48% of total Nike revenue.

### Marketplace Economics And Valuations

StockX was started in 2015, co-founded by former IBM consultant Josh Luber, Dan Gilbert - founder and Chairman of Quicken Loans and Rock Ventures as well as majority owner of the NBA's Cleveland Cavaliers, and Greg Schwartz, COO of StockX. The digital marketplace appears to have grown out Mr. Luber's previous company, Campless, a data aggregator that tracked the sneaker resale market. StockX describes itself as a "stock market for things," representing a live digital marketplace for buying and selling



limited edition sneakers. It has since expanded to include other verticals such as watches, handbags, streetwear and various collectibles (e.g. toys, Supreme), proving that it can scale its model and that there is a willingness among consumers to consume differently than in the past. Mr. Luber stepped down from his role as StockX CEO in mid-2019 and eventually departed the company in 2020. Scott Cutler, formerly SVP Americas at eBay, assumed the role of StockX CEO. Mr. Luber has since become the co-founder and Chief Vision Officer of Fanatics Collectibles and founder of zerocool which Fanatics describes as “the company’s pop culture, art, and entertainment vertical.”

### Take Rates For StockX And Average Order Value Estimates

The live digital marketplace, with ease of use, offers a fluid trading platform across multiple price points, a plethora of data including transparency in pricing for anonymous buyers and sellers, historical pricing data, and provides product authentication in acting as a middleman while remaining inventory-light. Complex Media describes StockX as “one of the most reliable authenticators in the aftermarket game” with press reports in the past indicating its “fake rate” (% of goods that are non-authentic) as low as 2%.

Recall too that these inventory-light resale marketplaces have “take rates” in the form of commissions, a cut of the sale price, and/or levied processing fees for the transaction and shipping. According to StockX’s site, their established “seller levels” include a base transaction fee, which ranges from 8% (level 5) to 10% (level 1) before processing fees. When we hosted StockX CEO Scott Cutler for a fireside virtual chat on 12/14/20, their revenue as a percentage of GMV was “over 20%” at that time. We detail different levels of take rates across the StockX platform below.

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Figure 36 StockX Take Rates

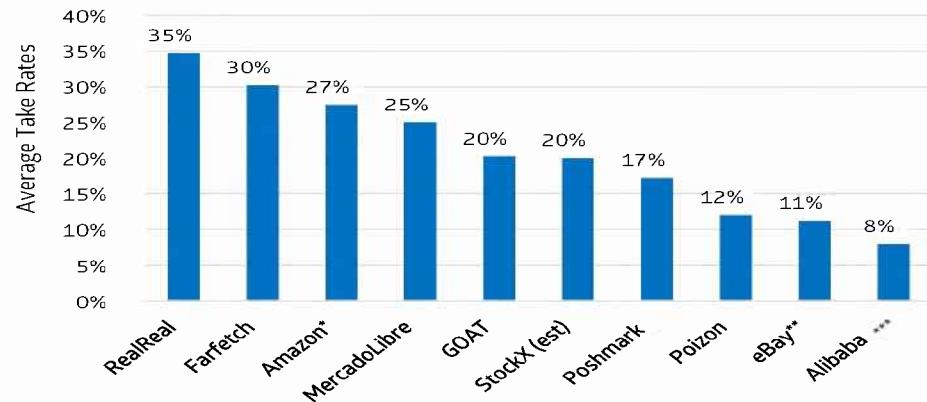
Level	Number of Sales Required	Or	Sales \$ Required	Transaction Fee
1	NA		NA	10.0%
2	3	Or	\$500 (USD)	9.5%
3	6	Or	\$1,500 (USD)	9.0%
4	25	Or	\$5,000 (USD)	8.5%
5	250	Or	\$30,000 (USD)	8.0%

Source: StockX.com, Cowen and Company

Reported revenue is a function of take rate, including fees in most cases, on GMV for marketplaces. We detail digital marketplace take rates in the charts below including Amazon (AMZN, John Blackledge), Farfetch (FTCH, Oliver Chen and John Blackledge), Alibaba, eBay (EBAY, John Blackledge), The RealReal (REAL, Oliver Chen and John Blackledge), and Poshmark (POSH, Oliver Chen). We note Amazon has a take rate of roughly 22% and Farfetch at 21%.



Figure 37 StockX And GOAT Take Rates Are Favorable



\*Amazon reflects a blended take rate for FY21. \*\*eBay take rate includes value added services on top of base rate of 7.9% in FY21. \*\*\*Take rate listed is for AliExpress. For Alibaba, commission ranges from 5%-8%. RealReal, Farfetch, MercadoLibre, Poshmark data is from company filings for FY21 or Q4:21. GOAT and Poizon data from their respective marketplace sites. StockX is our estimate. Source: Company reports and Cowen and Company

We estimate that Average Order Value is \$300+ for the leading sneaker resale marketplaces – StockX, GOAT and Stadium Goods - although we recognize that these marketplaces have expanded beyond the sneaker silo to include other categories. We detail AOVs for a select group of leading marketplaces in the chart below. We believe AOV could increase over time as leading franchises mature and more users join the platforms. The key risk to the businesses and AOV will be the balance of supply and demand and potential to turn to other asset classes such as NFTs.

Figure 38 Digital Marketplace AOV



Farfetch and The RealReal figures are for FY21 reported in company filings. GOAT and Flight Club figures from most recently available data in "GOAT Gets \$60 Million and Merges with Flight Club to Create a Sneaker Superpower" and StockX is a Cowen estimate. Source: Company Reports, Cowen and Company

### Valuations Of Digital Marketplaces Remain High Relative To Other Sectors

Attractive take rates (double-digit%) and average order values (\$300+) create opportunity for these concepts to scale, expand user bases and establish competitive advantage. We note the Mean EV/Sales multiple on an FY1 basis for digital



marketplaces is 3.4x, with average FY1 to FY2 revenue growth of 17% to 19% in our valuation comp table below.

Figure 39 Valuations Of Digital Market Places And Digital Commerce Enabled Platforms

MMs Company	Ticker	Rating	Price	Market Cap.	Enterprise Value	Net Debt	Revenue FY1	Growth FY2	FY1 Margins Gross	EV/Revenue FY1	EV/Gross Profit FY1	EV/EBITDA FY1
<b>Marketplaces</b>												
Alibaba Group Holding Ltd	BABA	NR	\$85.50	\$231,810	\$1,082,920	NM	20%	12%	36.9%	17.3%	1.3x	1.1x
Amazon*	AMZN	1	\$2,109.57	\$1,073,181	\$1,136,246	\$63,065	12%	17%	42.5%	13.6%	2.2x	1.8x
Ebay*	EBAY	2	\$43.43	\$24,314	\$26,615	\$2,301	-6%	4%	72.4%	34.0%	2.7x	2.6x
Etsy	ETSY	NR	\$75.86	\$9,643	\$11,049	\$1,406	12%	18%	70.7%	26.6%	4.3x	3.6x
Farfetch**	FTCH	1	\$7.67	\$2,925	\$2,374	-\$551	22%	26%	45.6%	1.0%	0.9x	0.7x
MercadoLibre	MELI	NR	\$748.39	\$37,702	\$39,357	\$1,655	48%	31%	44.7%	9.6%	3.8x	2.9x
Shopify	SHOP	NR	\$349.62	\$43,989	\$37,938	-\$6,051	27%	30%	51.6%	2.6%	6.5x	5.0x
Wayfair*	W	1	\$49.70	\$5,231	\$7,179	\$1,948	-5%	13%	27.2%	2.3%	0.5x	2.0x
							<b>Mean</b>	16%	19%	49%	13%	2.8x
							<b>Median</b>	16%	17%	45%	12%	2.4x
<b>Commerce Enabled Platforms</b>												
Block*	SQ	1	\$81.18	\$47,125	\$47,401	\$276	0%	22%	33.8%	4.2%	2.7x	2.2x
Shopify	SHOP	NR	\$349.62	\$43,989	\$37,938	-\$6,051	27%	30%	51.6%	2.6%	6.5x	5.0x
							<b>Mean</b>	13%	26%	43%	3%	4.6x
							<b>Median</b>	13%	26%	43%	3%	4.6x
<b>Apparel E-Commerce</b>												
Asos	ASC	NR	£1,400	£1,399	£1,529	£129	7%	14%	44.5%	5.9%	0.4x	0.3x
Revolve**	RVLV	1	\$27.04	\$1,982	\$1,729	-\$254	31%	21%	54.9%	11.6%	1.5x	1.2x
Zalando	ZAL	NR	€35.54	€9,316	€9,619	€303	13%	18%	41.7%	5.7%	0.8x	0.7x
The RealReal**	REAL	1	\$3.14	\$296	\$541	\$244	43%	27%	58.4%	-14.7%	0.8x	0.6x
Poshmark***	POSH	2	\$10.90	\$852	\$268	-\$584	12%	17%	83.5%	-9.4%	0.7x	0.6x
							<b>Mean</b>	21%	19%	57%	0%	0.8x
							<b>Median</b>	13%	18%	55%	6%	0.8x
<b>Transaction Platforms</b>												
Coinbase	COIN	NR	\$63.40	\$14,075	\$11,930	-\$2,145	-30%	24%	76.5%	1.1%	2.3x	1.9x
Intercontinental Exchange	ICE	NR	\$96.69	\$53,979	\$67,843	\$13,864	5%	5%	NM	64.9%	9.1x	8.7x
Nasdaq	NDAQ	NR	\$144.29	\$23,761	\$29,493	\$5,732	6%	5%	NM	54.7%	8.2x	7.8x
CME Group	CME	NR	\$190.04	\$68,303	\$70,147	\$1,845	7%	4%	NM	68.5%	13.9x	13.3x
							<b>Mean</b>	6%	5%	NM	63%	10.4x
							<b>Median</b>	6%	5%	NM	65%	9.1x

\*Covered by John Blackledge

\*\*Covered by John Blackledge and Oliver Chen

^Covered by George Mihalos

\*\*\*Covered by Oliver Chen

1=Outperform; 2=Market Perform; 3=Underperform; and NR=Not Rated. Bloomberg pricing 5/20/22. \*Covered by John Blackledge. \*\*Covered by John Blackledge and Oliver Chen. ^Covered by George Mihalos. \*\*\*Covered by Oliver Chen. Source: Company Reports, Cowen and Company

## Parallels Between Sneaker Resale And NFTs - Blockchain And Web3 Have Major Implications For Sneaker Resale And Trading

Sneaker resale market activities such as trading, investing, collecting and consuming shares similar characteristics with the nascent NFT market. NFTs (Non-Fungible Tokens) created new content, platforms and communities which the sneaker resale market can use to scale even further. In mid-January 2022 StockX, "a global platform to trade and consume current culture," announced the launch of Vault NFTs which it describes as providing customers the ability to invest in NFTs tied to physical products and trade them instantly.

We attended Shoptalk's 2022 conference in-person in Las Vegas this past March, and it was evident that a new world order is developing in consumer around the Metaverse/NFTs, ESG opportunities and risks, livestreaming and omni-channel convenience. New forms of engagement and commerce are emerging with a next gen consumer (Gen Z) and risks are rising rapidly for legacy models, with investments



needed to address the disruption ([Shoptalk '22: Rise Of Digital Assets, Live Commerce & Future Of Supply Chain](#)).

The topic of Web3 arose frequently among panelists and presenters. Investments and engagement in the Metaverse appear to be in the very early innings within the industry, but attention is rapidly turning towards it given the massive shift in social engagement and decentralized nature of it. For perspective, media reports, including FastCompany's article "[Here's How We Can Build A Sustainable Metaverse](#)," indicate that the metaverse will grow exponentially. Early adopters appear to be characterized by brands with very strong customer affinity and established communities of consumers that have created or collaborated on NFTs and/or have a thoughtful presence on Roblox such as Nike's Nikeland on Roblox and MNLTH NFT in partnership with RTFKT, and adidas' NFT project with Bored Ape Yacht Club.

The consensus from the presentations we attended at ShopTalk 2022 is **(1)** an expectation that there will be a good deal of forthcoming experimentation around Web3 among brands in general, **(2)** brands and retailers are starting to explore what it means, and **(3)** theorizing on how shopping will look in this medium. The pace at which brands and retailers are entering the Metaverse and establishing their NFT strategies has been substantial, although the recent NFT market price decline may give pause in the near-term.

Why is this important? Consumers, **especially Gen Z**, are considering NFTs and the Metaverse as a part of their identity and utilizing platforms such as Roblox for their creative output, buying virtual homes and buying virtual clothes and footwear for their avatars. In the future, the Metaverse (which is still highly decentralized) represents the potential for revenue plus community but right now it's about building authenticity which Gen Z and Millennials place a high value on that attribute ([The Rapid Ascent Of Millennials And Gen Z: Ahead of The Curve + Video](#)). What is still to be determined is where is the high street and where the investments need to be.

Blockchain technology will play an enormous role in terms of a medium of exchange in the form of crypto assets and in the role of authentication. Brands without compelling digital assets, communities, and links to the physical world will be disadvantaged. The next generation consumer is going to value goods that are not physical.

### New Assets And Mediums Of Exchange

Web3 traffic and interest is monetizing attention with user owned assets and tokens. The Metaverse looks to become an immersive human experience in a digital realm, and we think sneakers, which play a large role in culture and commerce in the physical world, are going to be an important part of Web3. As mentioned earlier, investments and engagement in the Metaverse appear to be in the very early innings within the industry, but attention is rapidly turning towards it given the massive shift in social engagement and the decentralized nature of it. Based on conversations we have had with experts in digital assets, we believe there will be a lot of forthcoming experimentation around Web3 among brands in general, who are starting to explore what it means and theorizing on how shopping will look in this medium. According to Chainalysis, the value of NFTs reached \$44B in 2021 with the leading trading platform, Open Sea, now valued privately at \$13B.

### NFTs As An Alternative Asset Class – Trading, Collecting, Authenticating, Investing

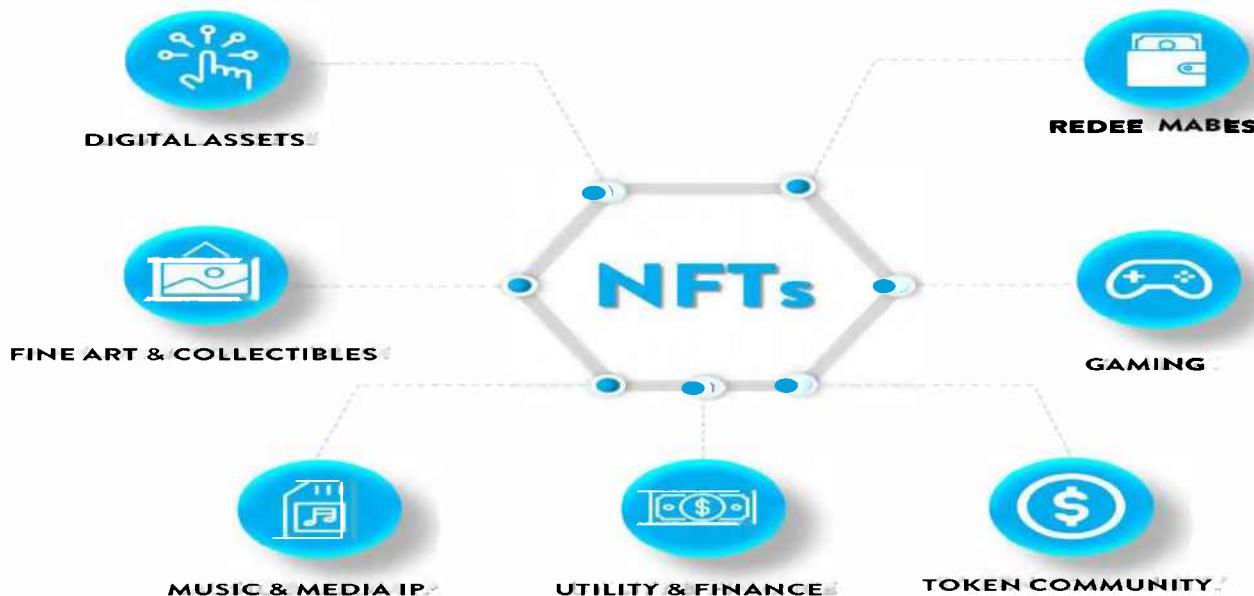
For perspective, Non Fungible Tokens (NFTs) are distinct objects, status and creativity in the Metaverse that exist on the Blockchain and are unique and traceable. Blockchain

technology provides software code that traces each NFT back to the owner's digital wallet. Ownership and authenticity are clear. Aside from the benefits of direct ownership, there are potential benefits through access to community and future access to new tokens and offerings. The concept of intellectual property rights as it relates to the Metaverse, Web3 and NFTs is complicated but blockchain technology is the linchpin of ownership and authentication while crypto is the medium of exchange.

Brands without compelling digital assets, communities, and links to the physical world will be disadvantaged. The next generation consumer is going to value goods that are not physical and our survey confirms next generation consumers (GenZ and Millennials) are actively purchasing and trading non-physical goods. For example, CryptoPunk #7523 NFT was one of nine in a series that sold for \$11.75MM during an auction at Sotheby's last June 2021. According to Barron's ([Link](#)), artists Beeple and Pak sold NFTs for \$69MM and \$91MM, respectively.

*"Ownership and control is decentralized thanks to new innovation like non-fungible tokens (NFTs). This means that a new generation of internet services and products can be built so that the value of what is being created can be shared by the builders, creators and users of the services directly with each rather than going through middlemen."*

Figure 40 NFT Flowchart



Source: Cowen and Company

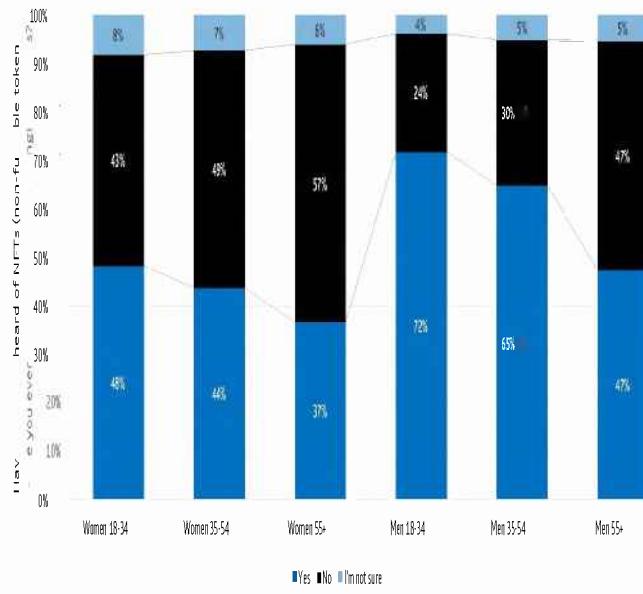
To better understand who is purchasing NFTs and the size of their transactions, we asked our Cowen Consumer Tracker Survey participants a handful of new questions to delve into their knowledge of, and trading in NFTs. Among the 2500 U.S. adult participants in the survey, and with three months of initial data, which we took an average of, approximately half or 50% of the total survey population reported having heard of NFTs, with 44% reporting not having heard of NFTs and 6% not sure. **With Aided brand awareness of NFTs as a category in our survey at only 50% of the survey population- we think that there is meaningful room for the category to expand.**



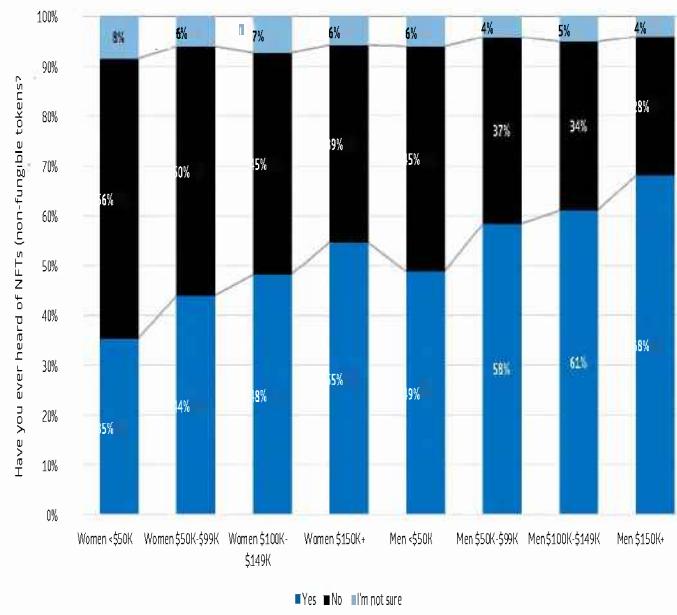
Men within the age cohorts of 18-34 and 35-54 over index to having heard of NFTs at an average of 72% and 65%, respectively, while Women 18-34 and Women 35-54 tracked slightly under the total population at an average of 48% and 44%, respectively. Not surprisingly, both Men and Women age 55+ had the least awareness of NFTs, at 47% and 37%, respectively.

From an income cohort standpoint, the highest awareness of NFTs is among Men with income of \$150K+ at an average of 68%, followed by Men with income of \$100K-\$149K at 61%, Men with income of \$50K-\$99K at 58% and Women with income of \$150K+ at 55%. Conversely, the lowest awareness of NFTs was Women with income below \$50K at an average of 35%.

**Figure 41 Have You Ever Heard Of NFTs (Non-Fungible Tokens)? – Age Cohort**



**Figure 42 Have You Ever Heard Of NFTs (Non-Fungible Tokens)? – Income Cohort**



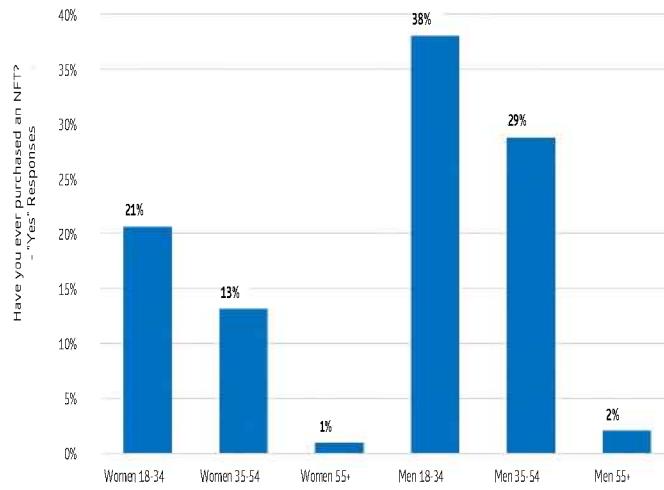
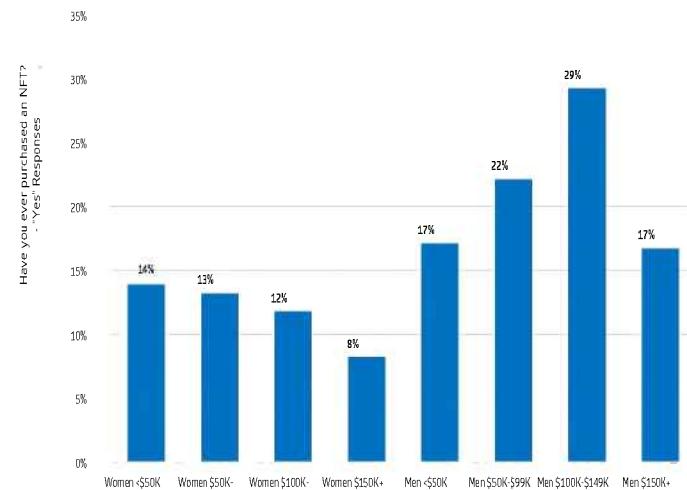
Source: Cowen Consumer Tracker Survey, N=2507/month for total survey population, Average Feb-2022 through Apr-2022

Turning to conversion, when asked "have you ever purchased an NFT?" 18% of the total survey population responded "Yes" with Men age 18-34 over indexing at 38%,

In analyzing conversion (which implies the population of the survey that responded YES to having heard of NFTs), when asked "Have you ever purchased an NFT?" an average of 18% of the total survey population responded "Yes" with Men age 18-34 over indexing at 38%, followed by Men age 35-54 at 29% and Women age 18-34 at 21%.

This would imply that of the 72% of Men age 18-34 that have heard of NFTs, 38% of those have purchased – which suggests that within the total population 27% of Men age 18-34 have purchased an NFT and this also suggests that 19% of Men age 35-54 have purchased an NFT.

By income cohort, both Men with income of \$100K-\$149K and Men with income of \$50K-\$99K each had the highest "Yes" responses to ever having purchased an NFT at an average of 29% and 22%, respectively. The next highest "Yes" responses were among Men with incomes of \$150K+ and <\$50K at 17%. Among Women, the income cohorts between <\$50K through \$149K were closely aligned, averaging between 12%-14%.

**Figure 43 Have You Ever Purchased An NFT? (YES Responses) – Age Cohort****Figure 44 Have You Ever Purchased An NFT? (YES Responses) – Income Cohort**

Source: Cowen Consumer Tracker Survey, N=1265/month for total survey population, Average of Feb-2022 through Apr-2022

**Figure 45 Implied NFT Conversion – Age Cohort**

	Total Population	Women 18-34	Women 35-54	Women 55+	Men 18-34	Men 35-54	Men 55+
Have you ever heard of NFTs? - "Yes" Responses	50%	48%	44%	37%	72%	65%	47%
Population Base (N)	2506	410	472	423	316	344	542
you ever purchased an NFT? - "Yes" Responses	18%	21%	13%	1%	38%	29%	2%
Population Base (N)	1265	198	207	153	227	223	257
of Population that has purchased an NFT	9%	10%	6%	0.3%	27%	19%	1%

Source: Cowen and Company based on our data from the Cowen Consumer Tracker Survey, an average of Feb-2022 through Apr-2022

**Figure 46 Implied NFT Conversion – Income Cohort**

	Total Population	Women <\$50K	Women \$50K-\$99K	Women \$100K-	Women \$150K+	Men <\$50K	Men \$50K-\$99K	Men \$100K-\$149K	Men \$150K+
Have you ever heard of NFTs? - "Yes" Responses	50%	35%	44%	48%	55%	49%	58%	61%	68%
Population Base (N)	2506	493	426	234	152	256	395	336	214
you ever purchased an NFT? - "Yes" Responses	18%	14%	13%	12%	8%	17%	22%	29%	17%
Population Base (N)	1265	174	188	112	83	125	230	206	146
of Population that has purchased an NFT	9%	5%	6%	6%	4%	8%	13%	18%	11%

Source: Cowen and Company based on our data from the Cowen Consumer Tracker Survey, an average of Feb-2022 through Apr-2022

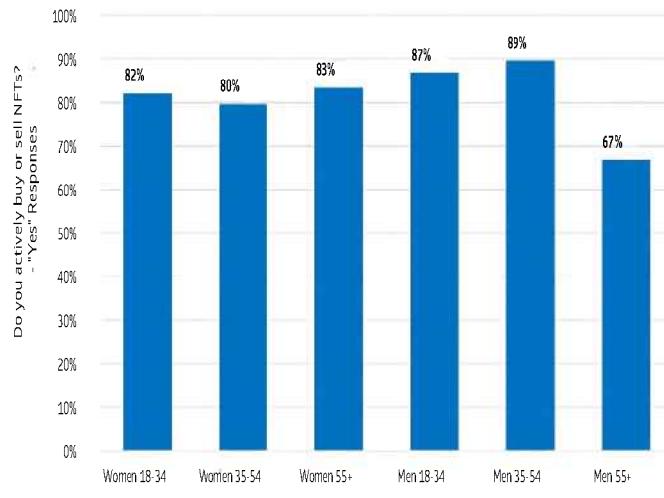
### Making Markets In NFTs – The Art of Trading

Among survey respondents who reported having purchased an NFT, we then asked if they "actively" buy or sell NFTs. "Yes" responses were highest among Men age 35-54 at an average of 89%, followed by 87% among Men 18-34 and Women age 18-34 at 82% versus the total survey population at an average of 86%. Within the income cohorts, the



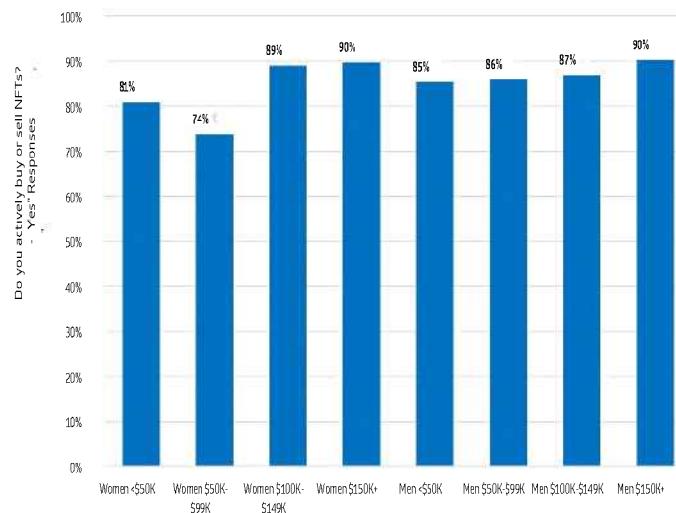
data indicates that the most active traders in NFTs are Men and Women with incomes of \$150K+ at an average of 90%. We caution that these percentages appear high across the age and income cohorts and bear further watching as we only have three months of data so far and the sample size is understandably low (N is an average of ~228 for the three months) which can increase volatility in results.

**Figure 47 Do You Actively Buy Or Sell NFTs? (If First Responded “Yes” To Having Ever Purchased An NFT) – Age Cohort**



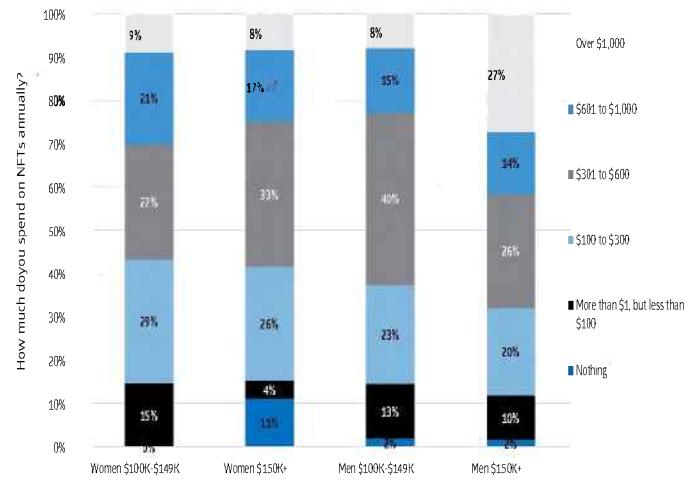
Source: Cowen Consumer Tracker Survey, N= an average of ~ 228 for the three months for the total survey population, Feb-2022 through Apr-2022

**Figure 48 Do You Actively Buy Or Sell NFTs? (If First Responded “Yes” To Having Ever Purchased An NFT) – Income Cohort**



Among these active traders in NFTs, we then asked “how much do you spend on NFTs annually?” and generally more than 50% of the spend falls within the \$100-\$600 annually among the total survey population at an average of 27% for \$301-\$600 and 29% for \$100-\$300. For Men age 18-34, 33% of their annual NFT spend is between \$301-\$600 and for Men age 35-54, it was 26%.

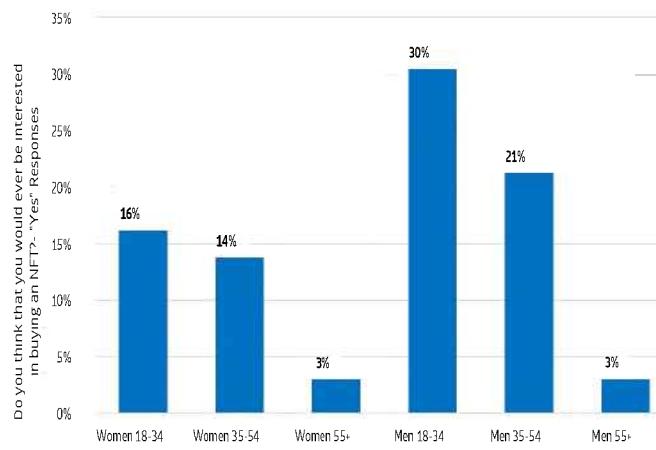
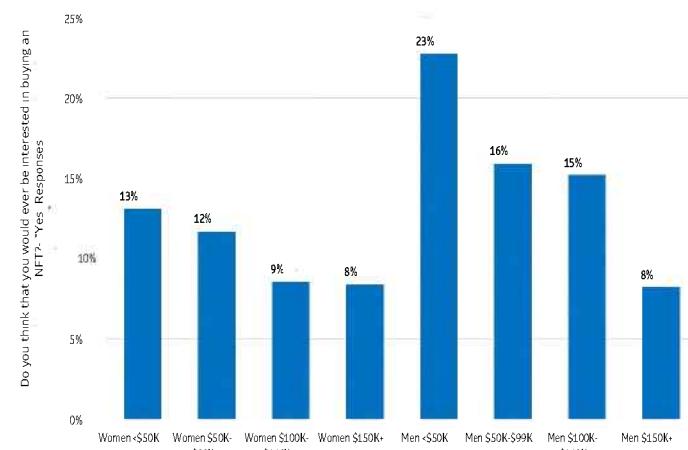
Among the income groups with the most active NFT trading, Women with income of \$100K-\$149K spent between \$100-\$300 at 29% on average, Men with income of \$150K+ spent 20% annually, and Men with income of \$50K-\$99K spent 31%. The most spent between \$301-\$600 was 40% among Men with income of \$100K-\$149K.

**Figure 49 How Much Do You Spend On NFTs Annually? (If First Responded "Yes" To Having Ever Purchased An NFT)– Age Cohort****Figure 50 How Much Do You Spend On NFTs Annually? (If First Responded "Yes" To Having Ever Purchased An NFT)– Income Cohort**

Source: Cowen Consumer Discretionary Survey, N=198/average for the three months for the total survey population, Feb-2022 through Apr-2022

### Seemingly High Future Purchase Intentions For Those That Have Not Yet Purchased NFTs

Finally, among those respondents who said "No" to having ever purchased NFTs, we asked "do you think that you would ever be interested in buying an NFT?" "Yes" responses around future potential transaction intent was highest among Men age 18-34 at an average of 30% and Men age 35-54 at 21%. Within the income cohorts, the highest future potential transaction intent was among Men with income of <\$50K at an average of 23%. We note that future intent does not guarantee actual results.

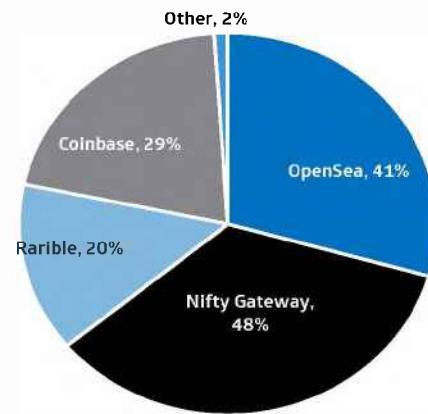
**Figure 51 Do You Think That You Would Ever Be Interested In Buying An NFT? (If First Responded "No" To Having Ever Purchased An NFT)– Age Cohort****Figure 52 Do You Think That You Would Ever Be Interested In Buying An NFT? (If First Responded "No" To Having Ever Purchased An NFT)– Income Cohort**

Source: Cowen Consumer Tracker Survey, N= average of 1037 for the total survey population, Feb-2022 through Apr-2022



Among those survey participants that have heard of and purchased NFTs, we asked which platform they use to trade NFTs, and the two-month data average indicates a concentration among Nifty Gateway and OpenSea. The Nifty Gateway platform was co-founded in 2018 by Duncan and Griffin Cock Foster and was later acquired in 2019 by Gemini, "a cryptocurrency exchange and custodian" that was co-founded by Cameron and Tyler Winklevoss. OpenSea describes itself as the "world's first and largest NFT marketplace" with a view that "open protocols like Ethereum and interoperable standards will enable vibrant new economies." Co-founded by Devin Finzer and Alex Atallah, OpenSea launched in late 2017.

Figure 53 Where Have You Purchased (Or Sold) NFTs? – Total Population



Source: Cowen Consumer Tracker Survey, N=average of 220 for two-month period for the total survey population, Mar-2022 through Apr-2022

Figure 54 Where Have You Purchased (Or Sold) NFTs? - Age Cohort

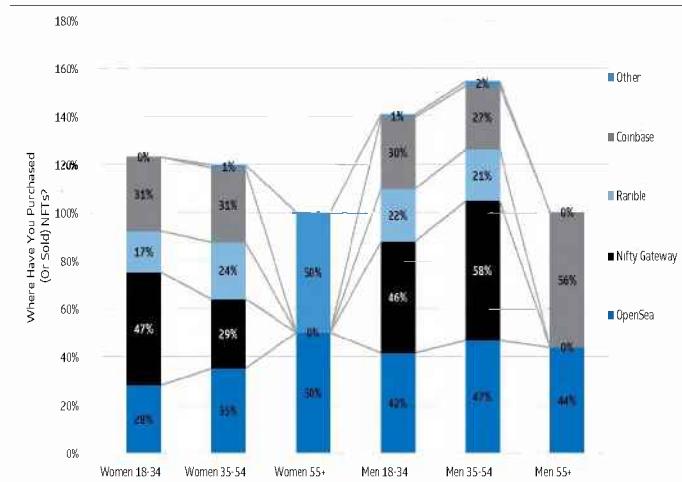
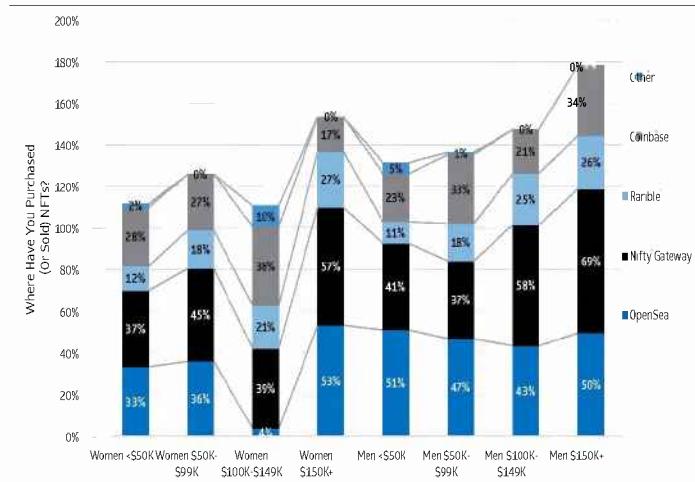


Figure 55 Where Have You Purchased (Or Sold) NFTs? – Income Cohort



Source: Cowen Consumer Tracker Survey, N=average of 220 for the two-month period for the total survey population, Mar-2022 through Apr-2022



## Creating And Sustaining Value In NFTs

### Case Study: Nike X RTFKT

Nike is investing in Web3 as evidenced by its December 2021 announcement of the acquisition of privately-held **RTFKT** (pronounced “artifact” and terms were not disclosed), an operator in NFTs. RTFKT Studios, which describes itself as a “creator led organization,” was founded in 2020 by Benoit Pagotto, Chris Le and Steven Vasilev and “uses the latest in game engines, NFT, blockchain authentication and augmented reality, combined with manufacturing expertise to create one of a kind sneakers and digital artifacts.” Nike views the acquisition as broadening its multi-year digital transformation. RTFKT has experience in sneaker collaborations, as tech magazine Input reported in an [article](#) on 5/7/21 that RTFKT partnered with NYC streetwear and sneaker designer Jeff Staple of Staple Design, STAPLE label and The Pigeon “to create his first NFTs.”

**While Nike and others brands historically capture no direct revenue from the resale/secondary market, we believe the market creates a powerful halo and a measurement for brand heat but that lack of revenue sharing may change in Web3**

According to Input, RTFKT and Mr. Staple released “two color schemes for an entirely original sneaker” in relation to the original pigeon, pricing a purple and silver style at \$2,021 and a silver and white style at \$500. The offer “packaged the NFTs with a physical version of the sneaker.”

While Nike and others brands historically capture no direct revenue from the resale/secondary market, we believe the market creates a powerful halo and a measurement for brand heat but that lack of revenue sharing may change in Web3. RTFKT launched the first Nike x RTFKT co-branded NFT in Nike’s fiscal Q3:22 (February 2022 quarter-end) called MNLTH, pronounced “monolith,” on OpenSea. RTFKT’s recent launch is part of the Nike Dunk Genesis Cryptokicks collection of 20K NFTs launched in the collaboration.



## NFTs Could Help Power Nike's Consumer Direct Offense As Nike Cryptokicks Have Traded For As High As \$130K And Roughly \$11MM Has Been Spent On The Company's First Drop

NFTs provide a potential royalty and fee structure for the creator (e.g. Nike, Jordan) and their intellectual property and this could extend across other brands in the apparel, footwear and accessories space. Though we concede that Nike is again well ahead of its competition in establishing the company's technology in an emerging market.

Separately, Nike created Nikeland on Roblox, an online game platform and creation system, in Nov-2021. LeBron James, who has a [lifetime contract with Nike](#), visited Nikeland during the 2022 NBA All-Star Week, "coaching and engaging with players." Rewards for physical gameplay included the ability to unlock virtual products such as LeBron 19 sneaker styles that were exclusive on Roblox.

### The "Yugaverse" - Successful NFTs Will Have Utility, Membership And Community Features

Yuga Labs is "a blockchain technology company that develops NFTs and digital collectibles," according to Crunchbase, including the development of the high profile **Bored Ape Yacht Club**. Headquartered in Miami, FL, Yuga Labs was founded in 2021 by Greg Solano (aka "Gargamel") and Wylie Aronow (aka "Gordon Goner"), in addition to two other unnamed co-founders, according to a 2/4/22 BuzzFeed article ([Link](#)) which revealed their real life identities. The company, or Yuga universe, has since expanded to include more than 40 employees, led by CEO Nicole Muniz.

According to the Company's site, Yuga Labs co-founders view the opportunity in NFTs as follows:

*"an opportunity to create art and tell stories on a new medium, but if you could prove irrefutably that a certain digital artwork was authentic, then you could use that artwork as a key to access locked content, experiences, apparel...anything. Your NFT could double as your membership card to an exclusive club."*

Out of this opportunity came the development of Bored Ape Yacht Club (BAYC). Yuga Labs describes an "Ape" as slang for crypto traders. Envisioning a scenario where "those that aped" were highly successful with crypto, it reportedly begged the question, "what is a bored ape to do?" and thus Bored Ape Yacht Club was born, eventually paving the way for its own cryptocurrency ApeCoin. According to Fortune's 3/18/22 article ([Link](#)), Yuga Labs hired freelance artists to design the Apes, which are distinguished by varying character traits.

### Yuga Labs As A Consolidator

The Yugaverse expanded in March 2022 through a notable acquisition. Yuga Labs announced it acquired the intellectual property and copyright in the art of CryptoPunks and Meebits NFT collections (there are 423 CryptoPunks and 1711 Meebits) from Larva Labs with the intention of sharing them with Web3 community, "bringing additional utility to both collections."

Larva Labs, which was co-founded by Matt Hall and John Watkinson, created CryptoPunks, a collection of 10,000 unique collectible characters stored on the Ethereum blockchain that is considered "one of the earliest NFTs" while Meebits is a collection of 20,000 unique 3D voxel characters on the blockchain. Terms of the deal



were not disclosed but a 3/11/22 Fortune article ([Link](#)) estimates a purchase price of “more than \$100MM,” based on the average selling prices on DappRadar at that time for both CryptoPunks (\$177,420 USD) and Meebits (\$16,100 USD).

*“The possibilities for blockchain’s impact on culture are endless, and so we are building a beautiful, interoperable world for people to explore and play in. There’s a lot to come.” – Nicole Muniz, CEO of Yuga Labs*

### Top Venture Capital Investors Have Taken Notice of NFTs Potential

In March of 2022 Yuga Labs closed \$450 million in a seed funding round that gives it a post-money valuation of approximately **\$4 billion**. The round was led by venture-capital firm Andreessen Horowitz’s a16z crypto fund. The funding round also included Animoca Brands, its subsidiary The Sandbox, and the cryptocurrency exchange FTX Trading Ltd also participating. We note that Andreessen Horowitz previously funded OpenSea, Dapper Labs, and Coinbase among others. According to media reports, Yuga Labs generated \$127 million in net revenue last year, and the Company projects it will generate \$455 million in 2022. Most of this revenue is generated through proceeds from virtual land sales.

### Valuing An NFT Is Challenging – Collecting, Trading, Investing

Based on our own asset valuation models and traditional finance models, the value of an asset is the present value of future cash flows discounted at an appropriate risk adjusted rate. Growth rates, risk and cost of capital are key assumptions. As it relates to sneakers and NFTs there can be hidden value in utility, personal collection and tastes.

Per DappRadar, the current market cap of BAYC is approximately \$2B, based on an average price of \$245.68K USD as of 5/9/22

A 3/12/22 Cointelegraph article ([Link](#)) suggested that “there is no rule book on how to assess an NFT valuation” as historical metrics used to value equity investments do not necessarily apply. The article surmises that “over time the value of NFTs is driven by a perception of which both buyers and sellers may lack any control.” Among valuation metrics for NFTs, the article highlights several traits with which to measure by, including **(1) Rarity** – a trait that is also critical to sneaker resale in our view; **(2) Utility** – e.g. application/use case trait; **(3) Tangibility** – e.g. tie to the real world; **(4) Interoperability** – e.g. multiple use cases; and **(5) Social Proof** – e.g. “acceptability.”

### Bored Ape Yacht Club

Bored Ape Yacht Club, as noted previously, was conceived by Mr. Solano and Mr. Aronow along with two other colleagues with the pseudonyms “Sass” and “Tomato” according to Yuga Labs’ description on its site pertaining to its evolution (“[Let’s make a NFT](#)”). The initial week-long pre-sale of BAYC took place beginning on 4/23/21 on the Ethereum chain, charging .08 ETH (approximately \$200 USD) to “mint a Bored Ape NFT.” Your unique Ape NFT also serves as your Yacht Club membership card. Roughly 500 Bored Apes were minted in the first week, before eventually selling an additional 9,500 by 5/1/21, with several “high-profile owners,” including Steph Curry, Jimmy Fallon, Paris Hilton, Snoop Dog and Justin Bieber among others according to media reports. Content and experiences followed, including **(1)** a companion dog NFT from the Bored Ape Kennel Club (BAKC), **(2)** merchandise drops, **(3)** the creation of BAYC Riverboat Casino in the metaverse in partnership with Decentraland, which describes itself as a virtual destination and marketplace for digital assets, and **(4)** the launch of Mutant Ape Yacht Club (MAYC) - a minting of 10,000 additional Mute Ape NFTs.



Figure 56 Bored Ape Yacht Club Reached A Peak Average Price Of 167.6245 ETH On 4/30/22



Source: OpenSea as of 5/9/22

### BAYC Is Valued North of \$2B

In early May 2022, OpenSea marketplace indicated that BAYC has 557.8K in traded volume among the 10K items and 6.3K owners with an all-time average price of 21.4266 ETH. Per DappRadar, the market cap of BAYC is approximately \$2B, based on an average price of \$245.68K USD as of 5/9/22. The 10K piece BAYC collection have generated over \$1B in sales in total.

### Partnerships And Collaborations

BAYC has formed several unique partnerships that have brought forth several compelling partnerships and we expect further JVs and collaborations to enhance the value of the Intellectual Property.

In December 2021, **Adidas** partnered with several leading brands within the NFT community, including BAYC, to launch “Into the Metaverse” NFT digital collectible grants that permit holders access to exclusive physical merchandise from adidas Originals and its partners at no additional cost. According to Complex ([Link](#)), the Adidas – Bored Ape NFT, known as Indigo Herz, sold “in Sept. 2021 for 46 ETH (~ \$156K USD) according to OpenSea.”

Game software and venture capital company, Animoca Brands announced in December 2021 that it would “develop and publish a play-to-earn blockchain game using Bored Apes NFTs.” In August 2021, BAYC partnered with LA streetwear brand The Hundreds for a merchandise collaboration consisting of hoodies, t-shirts and rugs.

**Not unlike the path we've seen develop for collectible sneakers and streetwear (e.g. Nike, Jordan and Supreme), leading auction houses, Sotheby's and Christie's, have held auctions of Bored Apes,**

Not unlike the path we've seen develop for collectible sneakers and streetwear (e.g. Nike, Jordan and Supreme), leading auction houses, Sotheby's and Christie's, have held auctions of Bored Apes, including a 9/9/21 Sotheby's auction of 101 Bored Apes and 101 Bored Ape Kennel Club Dogs. Sotheby's site indicates that the Bored Ape lot sold for \$24.4MM USD, above its estimate of \$12MM to \$18MM USD, while the BAKC lot sold for \$1.835MM USD, slightly above the midpoint of its \$1.5MM to \$2.0MM USD estimate. Similarly, Christie's held an auction on 9/17/21 in Hong Kong that included lots of Bored Apes and Mutant Apes along with other NFTs where Bored Ape #1401 sold for \$640K USD.

The popularity and community of BAYC has subsequently led to the creation of APE FEST, a week-long convention with member-only events, including a yacht party, limited edition merchandise and art gallery among other offerings, which closed the week with

 a charity auction dinner held at Michelin star rated NYC restaurant Carbone. Additionally, there is "Honorary Membership" in BAYC that OpenSea describes as membership "given to people who helped bring awareness to the BAYC project during its pre-sale phase but are not part of the 10K collection and do not have member privileges."

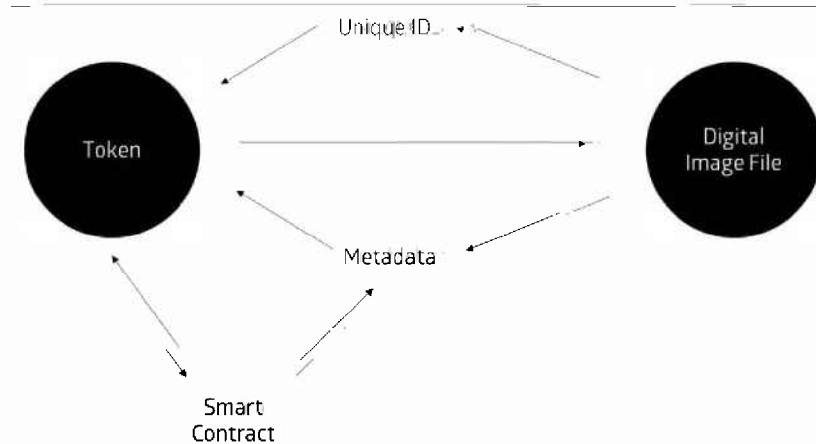
Further expanding the BAYC-verse, in late April 2022 Yuga Labs offered Bored Ape virtual land deeds, according to Fortune ([Link](#)), ahead of its upcoming "Otherside metaverse project." The deal generated roughly \$320MM USD at the time with the article reporting that "secondary sales surpassed \$558MM." In the process, however, Fortune and other media sources indicate the volume of transactions "congested the blockchain for hours," and impacted the value of ApeCoin.

### Key Drivers To The NFT Market (Oliver Chen)

In Cowen's view, several key forces drive an important future for non-fungible tokens including the growing importance and prestige of virtual goods, widespread adoption of video games and the associated gamification of consumer retail experiences, progression of augmented reality hardware – software – and use cases, and the sheer versatility and collectability of NFTs as consumer engagement tools.

What are NFTs? Non-fungible tokens are digital assets that are minted on a blockchain, currently primarily on Ethereum, and can be bought and sold on marketplaces. Once a token is purchased, individuals can store their NFTs in a crypto wallet, such as MetaMask. These digitized assets can touch multiple categories including Art, Collectibles, Gaming, as well as for Utility. Increased popularity of NFTs has driven new entrants into the NFT marketplace ecosystem that offer intuitive and user-friendly approaches to blockchain technology.

Figure 57 The Digitization Of Assets, Cowen On Key Aspects



Source: Cowen and Company

Smart contracts are an essential element to blockchain technology, and therefore NFT adoption. As the name suggests, smart contracts facilitate agreements on blockchains through code based on an agreed set of terms. We see smart contracts as the mechanism to establish trust in a decentralized blockchain network, or 'trustless' environment. The smart contract technology enables the transparency and traceable



nature of transactions on the blockchain. Once an NFT exists on a blockchain, metadata is used to describe the token as a more efficient use of storage on the blockchain.

**Key Data Points To Consider.** The NFT market had \$25bn collective sales in 2021, a steep acceleration from the \$95mm sales in 2020, per DappRadar. We believe the growth experienced in early 2022 was exceptional and rapid in the same vein as the 'meme' stock frenzy in early 2021. While the NFT market may not see a similar surge again, we believe digitizing assets on a blockchain is a permanent fixture for the foreseeable future. We expect the NFT market to continue to grow at a steady pace as consumer brands introduce NFTs to their marketing strategy and digital art remains a fixture and curiosity. Increased application for NFTs could drive further growth as digitized assets reach potential sectors such as real estate, legal contracts, and membership models. Note, according to CryptoSlam!, all-time NFT sales reached nearly \$36bn through mid-May 2022, and we see an additional opportunity through increased adoption, utility, and frictionless experience.

#### Cowen Assigns \$50bn Near-Term Opportunity for NFTs

Cowen assesses that the total NFT market is a \$50bn near-term global opportunity with potential of reaching \$70-110bn in 2023 based on our scenario analysis. Our base case of reaching \$50bn this year uses the current \$16bn in YTD NFT sales, per CryptoSlam, plus an average run rate for the remainder of the year. Our run rate uses the TTM average daily transaction volume multiplied by the TTM average NFT price to reach \$158m in daily NFT sales. We note, this assumes consistent NFT transaction value through broader adoption, increased non-crypto native interest, and popularity.

Figure 58 NFT Market Base Case Assumption

TM Transactions (k)	TTM Avg. Price	Daily Sales (\$USD, mm)	Run Rate (Remainder of Year, \$bn)	YTD Sales (\$bn)	2022 NFT Sales
404	\$392	\$158.3	\$31.7	\$16.2	\$47.8

Source: Cowen and Company, CryptoSlam!

- **Bull case:** Cowen's bull case assumes increased brand implementation into the NFT market, elevated average NFT prices, and additional utility of tokens. Key catalysts that could drive a larger TAM include greater utility use cases, 'safer' NFT storage options, and lower cryptocurrency volatility. The continued development of OpenSea and other like platforms significantly reduce any friction for customer entry and experimentation. We assign 120% growth in 2022 from the \$25bn sales in 2021 to reach \$55bn with opportunity to reach \$110bn by 2023.
- **Bear case:** Cowen's bear case considers significant risks with the NFT and crypto market, recessionary pressures facing the consumer, and general shifting in consumer attitudes towards the NFT market. Further, the bear case takes into account valuation sensitivity to a dynamic cryptocurrency environment, friction and inconsistent user experience in the early adoption period as education ramps, and the challenge of building trust within the decentralized ecosystem. The bearish scenario implies an 80% growth in NFT sales in 2022 to \$45bn and 60% growth in 2023 to \$72bn.

Figure 59 Sensitivity Analysis to NFT Market Size

Base Case			Bull Case			Bear Case		
	Total Sales \$USD	Growth Rate		Total Sales \$USD	Growth Rate		Total Sales \$USD	Growth Rate
2021	\$25		2021	\$25		2021	\$25	
2022	\$50	100%	2022	\$55	120%	2022	\$45	80%
2023	\$90	80%	2023	\$110	100%	2023	\$72	60%

Source: Cowen and Company

Based on our proprietary analysis, adoption is already apparent as Cowen's survey indicates 40% of Men aged 18-34 have purchased an item in the virtual world in the last 12 months, while just 24% of Women in the same age group responded "Yes". Two primary channels for the near-term growth include gaming and art & collectibles, which currently see 358k TTM weekly sales as of mid-May 2022.

**Key Data Points to Consider.** The NFT market had \$25bn collective sales in 2021, a steep acceleration from the \$95mm sales in 2020, per DappRadar. We believe the growth experienced in early 2022 was exceptional and rapid in the same vein as the 'meme' stock frenzy in early 2021. While the NFT market may not see a similar surge again, we believe digitizing assets on a blockchain is a permanent fixture for the foreseeable future. We expect the NFT market to continue to grow at a steady pace as consumer brands introduce NFTs to their marketing strategy and digital art remains a fixture and curiosity. Increased application for NFTs could drive further growth as digitized assets reach potential sectors such as real estate, legal contracts, and membership models. Note, according to CryptoSlam!, all-time NFT sales reached nearly \$36bn through mid-May 2022, with \$34bn of sales occurring over the past 12 months.

## So What? An NFT Strategy For Retail

Figure 60 Cowen Identifies The ESP Strategy For NFT Integration

Engagement	Status Symbol	Players
Loyalty programs	Picture for Proof ("PFP")	Openworld multiplayer games
Early access to events	Digital persona	Player accessories
Possession of physical goods	Digital prestige	Standalone games

Source: Cowen and Company

We see NFT implementation through three major themes in retail: Engagement, Status Symbols, and Players.

**Engagement:** Consumer brands and retailers can use NFTs to facilitate the digitization of assets for loyalty programs and membership. In this regard, NFTs operate more as a utility and opportunity to maintain existing relationships with customers through engagement. These tokens can represent various touch points including early access to ticketed events or possession of physical goods.

- **Key example:** Dolce & Gabbana and UNXD collaborated to create Collezione Genesi. Five pieces of the collection were physical pieces with virtual renderings while the remaining four pieces were strictly digital using the



polygon blockchain. In addition to the digital tokens, buyers received access to future Alta Moda events.

**Status Symbols:** We see brands leaning into collectible NFTs as part of a growing trend of digitization of prestige. This includes building on a larger online persona through digital assets and virtual worlds, as well as using digital luxury as a status symbol, much like the real world. The Collectibles trend aligns well with the current popularization of Picture for Proof ("PFP") profile figures, as seen with the demand for CryptoPunks and Bored Ape Yacht Club.

- **Key example:** Gucci launched the 10KTF Gucci Grail collection with digital artist Wagmi-san. This NFT collection outfitted PFPs from 11 other popular collections, such as BAYC and Cool Cats, with Gucci merchandise.

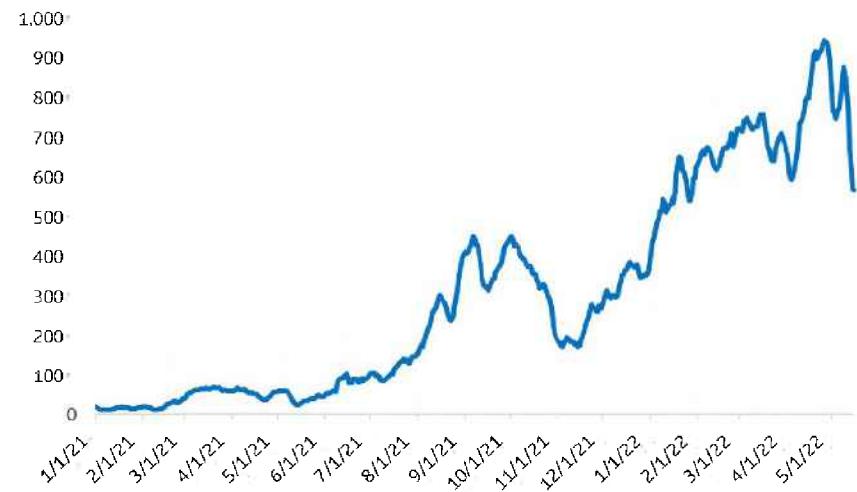
**Players:** Integration into open world multiplayer games provides direct access to millions of consumers that are already engaging with the gaming platforms. Roblox being one of the leading virtual worlds that allows users to develop their own games on the Roblox platform. Over 230mm people are registered to play Roblox, and there are at least 30mm signing in every day to take part in the virtual world. While Roblox remains primarily off-chain, early development on-chain indicates some interest in moving games to blockchain. Gaming remains a key unlock for any virtual activation for a brand, including minting NFTs. Opting for participation in an existing game may also relieve some tension or risk that comes with launching a standalone collection, in our view.

- **Key example:** Burberry's NFT collection in Mythical Games' Blankos Block Party represents one of the first moves for a luxury brand to integrate into a blockchain based game. Owners of the Sharky B NFT can personalize, upgrade, and sell their NFT within the Blanko Block Party ecosystem.

#### Understanding the NFT Market: Transactions And Prices

NFT trading volume has undoubtedly surged over the past two years. Granted, some of this data can be influenced by wash trading. Currently, the NFT daily transaction volume averages around 560k, similar levels to January 2022. We attribute a meaningful portion of the drop in volume during April and May due to a deceleration of activity on Axie Infinity, a blockchain mining video game. Even still, daily transaction volume is ~1500% above levels in May 2021.

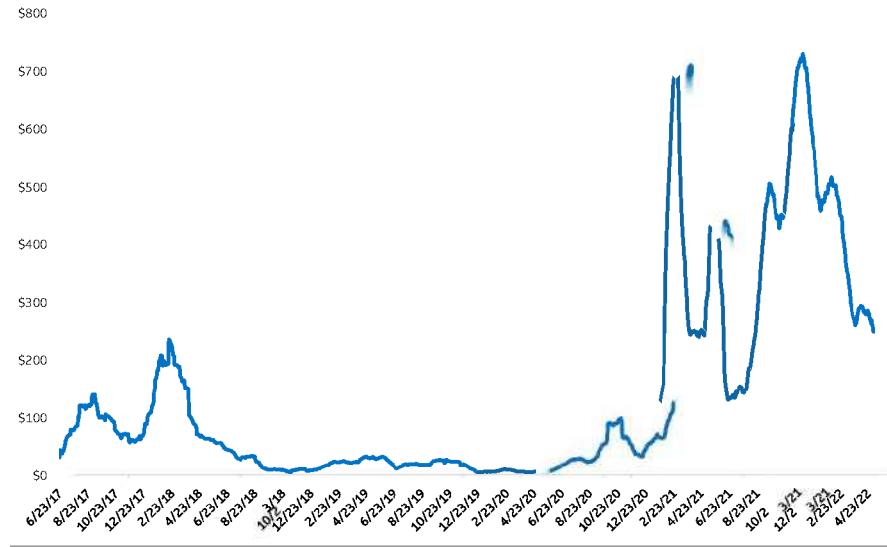
Figure 61 NFT Transactions Per Day (in thousands)



Source: Dune, Cowen and Company

Additionally, while the market has seen a meaningful decline in the average price of an NFT, the price remains 1,200% above the average price in May 2020. From the peak in late 2021, the average price of an NFT has decreased 67%, as of mid-May 2022. We recognize the significant fluctuations in the average price over the past five years, although the gradual increase in token transaction volume implies increased adoption in the overall NFT market.

Figure 62 NFT Median Sale Price



Source: Dune, Cowen and Company



## A Look At The Key Platforms

For any brand or business looking to introduce an NFT collection, OpenSea and LooksRare are the primary two marketplace platforms. OpenSea is the more entrenched site with established customer trust, although LooksRare competes on fees and community engagement. The NFT marketplace competitive landscape has relatively low barriers to entry, in our view, although there is some preference for early entrants given more time to attract buyers and sellers to the platform.

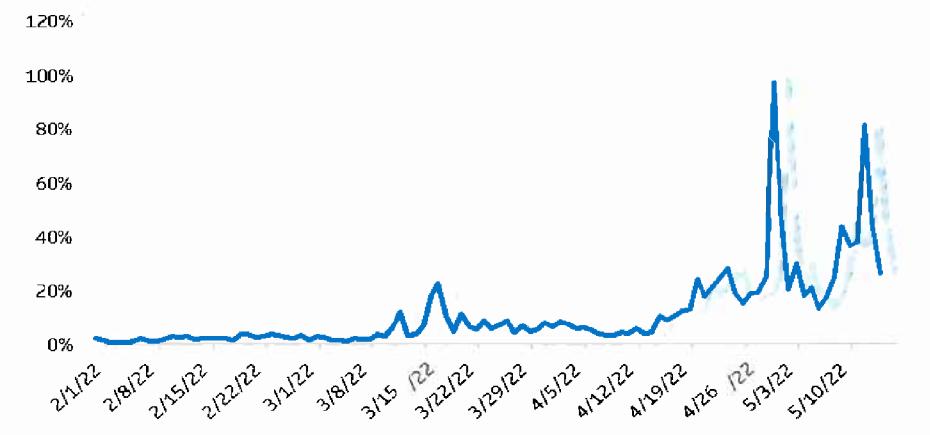
### OpenSea: The Largest NFT Marketplace

OpenSea is one of the largest marketplaces to create, buy, and sell NFTs. The platform offers token categories across art, music, virtual worlds, collectibles, and utility. OpenSea provides users with the capabilities to alternate between different chains, such as Polygon and Ethereum, to facilitate a better user experience given certain short comings of the Ethereum chain. Earlier this year, OpenSea closed a \$300mm funding round that implied a \$13.3bn valuation. This valuation represents almost 8x growth from the \$1.5bn valuation in July 2021 and indicates a high bar for new entrants into the marketplace arena.

### LooksRare: The Newest Addition of NFT Marketplaces, Although Volume Could Be Inflated

LooksRare was launched in January 2022 by two anonymous founders with a mission to provide a community centered marketplace experience. The creators of LooksRare positioned the marketplace as community oriented through incentivizing engagement with LOOKS tokens and decentralizing management and revenue. The platform is staked on the Ethereum blockchain, unlike OpenSea, which offers Polygon and Ethereum. LooksRare overtly competes with other marketplaces, namely OpenSea, by rewarding users who buy or sell NFTs on the LooksRare site. Users are rewarded with a LOOKS token for each transaction, motivating users to exchange tokens frequently. Critics have scrutinized LooksRare for inflated statistics due to users facilitating trades to collect LOOKS tokens, essentially "wash trading". That said, non-wash trading volumes have improved dramatically since January (see figure below).

Figure 63 LooksRare Non-Wash Trades as a Percentage of Total Volume



Source: Cowen and Company, theblockcrypto.com

### OpenSea Vs. LooksRare – Competitive Positioning

Between the two platforms, OpenSea has more history and customer trust, in our view. As discussed, LooksRare volume is seemingly higher than OpenSea, but this is largely due to individuals trading between their own accounts to collect the LOOKS tokens. LooksRare also attempts to drive traffic from OpenSea by offering a lower fee of 2% versus OpenSea's 2.5%, although we are unsure if lower fees are the primary vehicle for customer acquisition.

While LooksRare is implementing various strategies to benefit the 'community' of users, mainstream collections continue to be traded on OpenSea. We believe the main traffic driver to these platforms are access to popular, blue chip NFT collections, as well as ease of use, and trust.

Figure 64 Marketplace Monthly Volume – TTM



Source: theblockcrypto.com, Cowen and Company

### Ethereum Chain Dominates NFT Space

Ethereum's position as the chain of choice for NFT sales is underscored by all-time NFT sales almost reaching \$27bn, which represents over 50% of Cowen's \$50bn NFT opportunity. Meanwhile, the second largest chain on sales volume, Ronin, is directly tied to the gaming opportunity with NFTs. When evaluating any NFT launch, it is critical for a brand to consider which chain is used for minting as each blockchain offers multiple risks and opportunities.

Ethereum is the primary chain for NFT minting with just under \$27bn in all time NFT sales versus Ronin at nearly \$4.1bn. For context, Ronin is an Ethereum sidechain used in the blockchain-base game Axie Infinity. Native crypto users are currently assessing Solana's growing market share, as the chain could be the next Ethereum rival. A Silicon Valley-based startup created the Solana chain with a mission to offer a faster and less expensive choice to Ethereum. The proof-of-stake (PoS) cryptocurrency includes capabilities for decentralized finance as well as NFT marketplaces. We recognize Solana's advancements within crypto through quicker transactions. That said, several criticisms of Solana surround outages, centralization, and supply uncertainty.



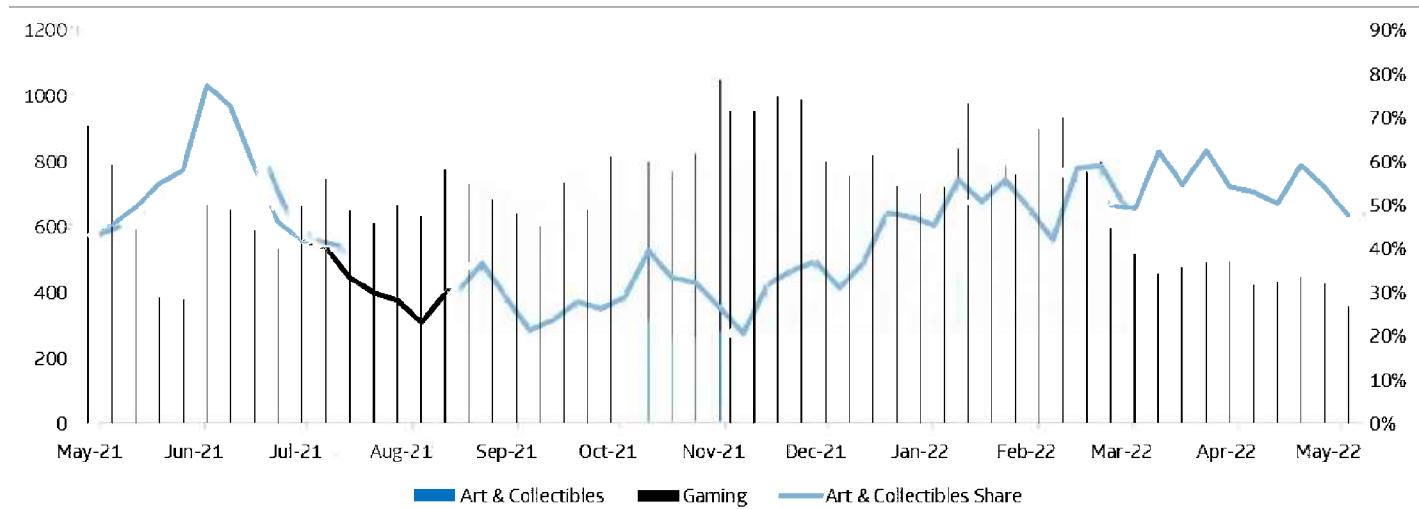
Figure 65 Blockchains By NFT Sales Volumes – All Time

Rank	Chain	Sales (\$mm)	Tokens (k)
1	Ethereum	\$26,899	9,968
2	Ronin	\$4,069	16,067
3	Solana	\$2,234	5,391
4	Flow	\$1,051	20,859
5	Polygon	\$588	1,265

Source: Cowen and Company, cryptoslam.io

### Slight Preference For Art & Collectibles Versus Gaming

By far, the most popular categories of NFTs and the most relevant to retail are Art & Collectibles and Gaming. We note weekly sales for the two categories has declined since late February, with Art & Collectibles gaining market share between the two. We expect to see some moderation in NFT sales in Art and Gaming as new use cases are introduced, such as experiential or redeemable tokens.

Figure 66 Art & Collectible Versus Gaming TTM Weekly Sales (\$K) 

Source: theblockcrypto.com, Cowen and Company

### NFT Collections Ranking Reveal Blue Chip Collections

The popularity of several NFT collections in early 2022 spiked the interest among non-native crypto consumers. We deem collections like CryptoPunks and Bored Ape Yacht Club the blue chip of NFT collections given their relative liquidity and value. Axie Infinity, a crypto-based game, ranked 1<sup>st</sup> place among the NFT collections on sales volume, but has recently faced softening demand as users turn to other games.

Figure 67 Collections Ranking – All Time

Rank	Collection	Sales (\$mm)	Buyers (k)	Tokens (k)
1	Axie Infinity	\$4,070	1,739	16,068
2	CryptoPunks	\$2,241	5	21
3	Bored Ape Yacht Club	\$2,117	11	29
4	Mutant Ape Yacht Club	\$1,517	21	39
5	Art Blocks	\$1,257	30	158
6	NBA Top Shot	\$999	430	19,940
7	Otherdeed	\$891	19	38
8	Azuki	\$754	14	30
9	VeeFriends	\$538	6	13
10	Moonbirds	\$530	12	17

Source: cryptoslam.io, Cowen and Company

## Considerations On Cowen's Assessment and Risks

### Volume Could Be Artificially Inflated

The data we use in this analysis supports a broad industry overview on the size of the NFT market. That said, volume and prices could be skewed due to wash trading. Wash trading is one of the main criticisms of the NFT market as the practice artificially inflates the value of assets. The illegal practice occurs when an individual represents both sides of a trade and the tactic is primarily used to influence the attractiveness of an NFT or coin.

Meanwhile, as broader adoption of NFTs touches other industries outside of art and gaming, NFT volume could begin to significantly increase. Growing use cases for NFTs supports other applications of digital assets, whether art or gaming, but it is important to understand underlying dynamics of NFT market segmentation.

### Acknowledgement of Risks

- **Sidechains:** Collections and companies could begin to offer launches on side chains from Ethereum, which are criticized for being more vulnerable to hacks. Recently, the creator of Bored Ape Yacht Club, Yuga Labs, inadvertently crashed Ethereum due to too much traffic flooding the chain.
- **Supply and Demand Imbalance:** User friendly NFT development platforms and more consumer brands entering the market could drive a significant imbalance between supply and demand. There could be increased risk regarding standalone collections as consumers focus on more liquid and well-known collections.
- **Variable Fees:** Gas fees are compensation to miners for their resources used to facilitate a transaction on the blockchain. These fees are entirely independent of the price of an NFT, and rather vulnerable to traffic fluctuations on the chain. Individuals or companies hoping to create their own NFTs often discover that gas fees can be more expensive than the token.



## NFTs Go Far Beyond Sneakers - The Sports Fan Economy Reimagined – Trading Cards, Collectibles, & NFTs

Fanatics is one of the most valuable privately held companies in the e-commerce and consumer sectors – recently valued at \$27B as of the Company's last funding round. Fanatics was estimated to have generated roughly \$5B in revenues last year, up +30% from the previous year, representing a +35% CAGR from \$250MM in 2011. The Company's outsized growth stems from its vertically integrated, data driven DTC model. Fanatics originally began by selling licensed apparel and accessories related to all-things sports, including teams, league championships and athletes. However, in the last year, the Company has expanded their breadth beyond the licensed sports industry to collectibles, betting & gaming, and digital collectibles/NFTs. Prior to its move into collectibles, NFTs and betting/gaming, roughly 80% of its core revenues came from the fanatics.com site or the partnered team and league sites (MLB, NFL, NBA, NHL, NASCAR, NCAA teams and others) which the company operates.

**Fanatics' core business is defined by vertical integration, personalization & customization, speed to market and market share gains from what management views is a \$1.5 trillion global apparel market**

Fanatics' core business is defined by vertical integration, personalization & customization, speed to market and market share gains from what management views is a \$1.5 trillion global apparel market - which continues to reaffirm our confidence in the global athletic, health and wellness and sports TAM. Fanatics' integration with Nike, adidas, and Under Armour is notable. Beyond this, as it develops its new endeavors in other sports-related arenas, it will continue to build deeper engagement and brand loyalty with its core consumers while allowing it new opportunities to unlock higher customer LTV.

V-Commerce is the brainchild of Fanatics Executive Chairman Michael Rubin and is designed around the owning, designing, producing and distributing exclusive merchandise allowing Fanatics to sell a differentiated product without being commoditized. V-Commerce combines the speed and ability to use technology and data to react to fan demand and allow its global partners to grow DTC and meet growing real-time demand.

Figure 68 Fanatics Funding History

Fanatics				
Date	Total Funding Amount (\$MMs)	Transaction Characterization	Lead Investors	Number of Investors
3/2/2022	\$1,500	Private Equity	Fidelity, BlackRock, MSD Capital	NA
8/10/2021	\$325	Private Equity	NA	7
3/24/2021	\$320	Private Equity	Blackstone Group, Franklin Templeton Investments, MLB, Neuberger Berman, Silver Lake, Thrive Capital	6
8/13/2020	\$350	Series E	Fidelity, Thrive Capital	4
9/6/2017	\$1,000	Series D	SoftBank Vision Fund	3
8/25/2015	\$300	Private Equity	Silver Lake	1
6/6/2013	\$170	Private Equity	NA	2
6/7/2012	\$150	Venture Round	Insight Partners	2
6/7/2012	\$75	Debt Financing	NA	1
<b>Total Funding</b>		<b>\$4,190.0</b>		17

Source: Crunchbase, Cowen and Company

### StockX Co-Founder Is Now At Fanatics

Mr. Rubin met with StockX co-founder Josh Luber in late 2020 where their conversation of all things e-commerce took a turn towards the trading cards business. After

 discussing the disjointed and overly layered approach to selling trading cards to consumers – manufacturers sell them to distributors who sell them to retailers who in turn sell them to consumers who often go on to resell them (usually the most desirable ones) on sites like eBay. Inspired by their meeting, Mr. Rubin hired Mr. Luber as the Chief Vision Officer in early 2021 for the newly launched Fanatics Collectibles division.

**in January 2022, Fanatics reportedly paid \$500MM to acquire the Topps trading card and collectibles business**

Following this, Fanatics began expanding into sports collectibles – acquiring the trading card manufacturing and distribution rights for the MLB, MLBPA, BNA, BPA, and NFLPA in August 2021. However, it didn't stop there. In January 2022, Fanatics reportedly paid \$500MM to acquire the Topps trading card and collectibles business from private equity firm Madison Dearborn Partners and former Disney Chairman & CEO Michael Eisner's Tornante firm – a decent return on the \$385MM paid by Madison Dearborn Partners and Tornante in 2006, but less the payout expected when Topps was set to go public via a SPAC and valued at over a billion dollars. All told, Fanatics has increased its revenue north of ~\$700MM through these acquisitions, even before the NBA and NFL rights kick in for 2026.

The year 2021 also saw the creation of Candy Digital, an NFT-based company. Candy Digital quickly acquired the licensing rights for the MLB and subsequently launched its own NFT marketplace in January 2022, logging \$1MM in trade volume in its first eight hours and more recently valued north of \$1.5B. Ultimately, Fanatics' goal for Candy Digital is to broaden the fanbase for digital collectibles and further deepen the relationship it has with its core sports fan consumer.

#### Fanatics Is A Disruptive Force Within Ecommerce and Sports

Web traffic to the Fanatics.com website as measured by Similarweb has started to normalize as of late. Unique visitors to the site seem to be range bound between 2.5MM to 4.5MM visitors per month. However, the Company more broadly continues to see vast consumer interest as measured by Google Trends growth. Google searches for Fanatics accelerated strongly in 2H:21 to high double-digit growth after tapering slightly in 2020.

Figure 69 Fanatics Google Search Trends Growth – 13-Week Avg. Y/Y



Source: Google, Cowen and Company

Figure 70 Fanatics Google Search Trends Growth – Four-Week Avg. Y/Y



#### Our Survey Data Supports The Continued Growth In Sneaker Ownership

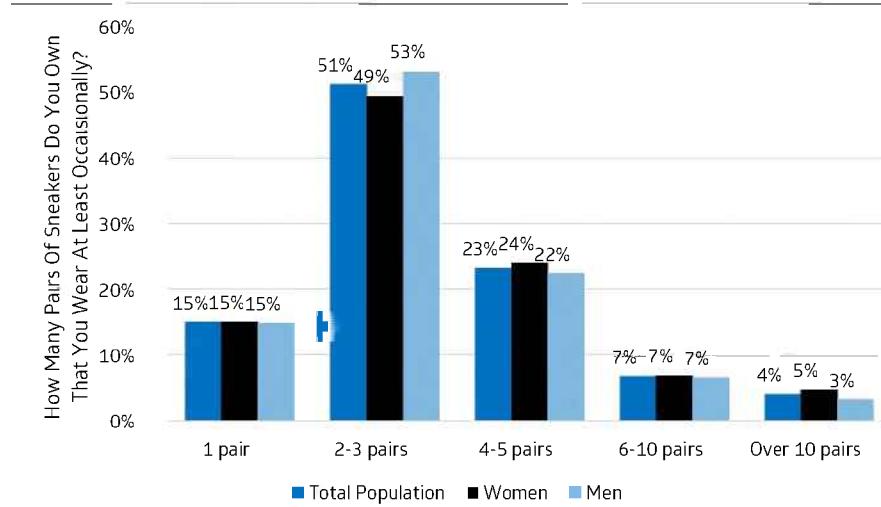
The secular trend around health & wellness is a positive for activewear in general, both apparel and footwear, and especially sneakers. The trend towards casualization appears to have staying power post-COVID according to our survey data and is translating well



to a hybrid work environment as consumers return to office. The return to office in itself is representing an opportunity for new, refreshed wardrobes and brands have responded to this need for casualization which we published in our 4/4/22 report, "[Post-COVID Permanent Vs. Transient Trends - Ahead of the Curve Follow-Up](#)."

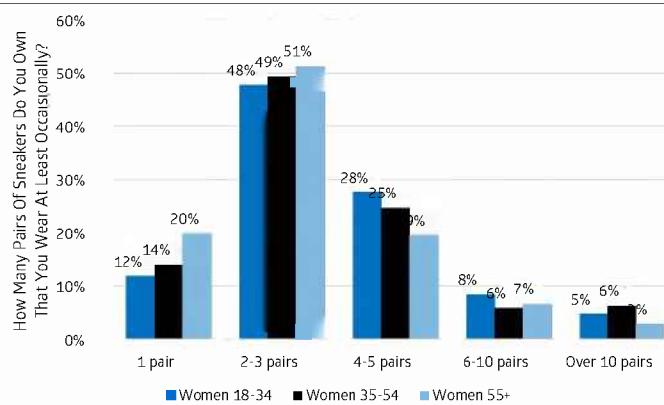
Updated proprietary data from the Cowen Consumer Tracker Survey through February 2022 indicates that the level of sneaker ownership is most prevalent for two to three pairs among the total survey population at 51%, followed by 23% for four to five pairs. Men slightly over-index to two to three pairs of sneaker ownership at 53% versus 49% for Women but Women over-index to ownership of four to five pairs of sneakers at 24% versus 22% for Men. Among the critical age cohort of 18-34, 43% of Men 18-34 own two to three pairs and 34% own four to five pairs of sneakers versus 48% and 28%, respectively, among Women 18-34. Among the income cohorts for both Men and Women, two to three pairs is the most common form of sneaker ownership, averaging above 50%. Ownership of six to 10 pairs is greatest among Women with income of \$150K+ at 11% and 9% for Men with income of \$150K+.

**Figure 71 Sneaker Ownership – Total Survey Population – 2-3 And 4-5 Pairs Lead**



Data represents responses to the question "How many pairs of sneakers do you own, that you wear at least occasionally?" Excludes "I don't own a pair of sneakers" responses. Source: Cowen Consumer Tracker Survey, N=2500/month for total survey population, Feb-2022

Figure 72 Sneaker Ownership – Women By Age Cohort



Data represents responses to the question "How many pairs of sneakers do you own, that you wear at least occasionally?" Excludes "I don't own a pair of sneakers" responses. Source: Cowen Consumer Tracker Survey, N= ~418/month for total survey population, Feb-2022

Figure 73 Sneaker Ownership – Men Age 18-34 Lead In Multiple Pairs

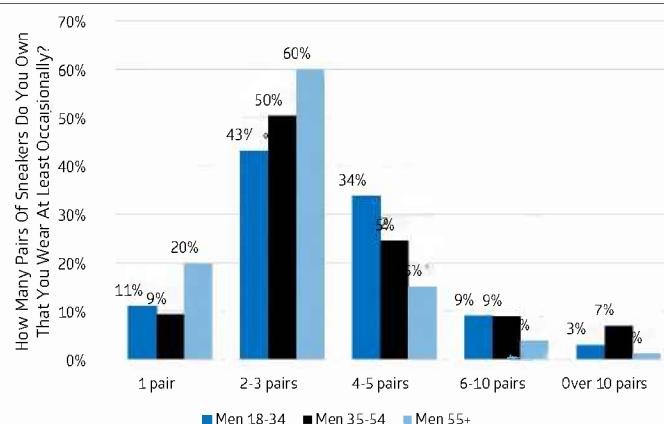
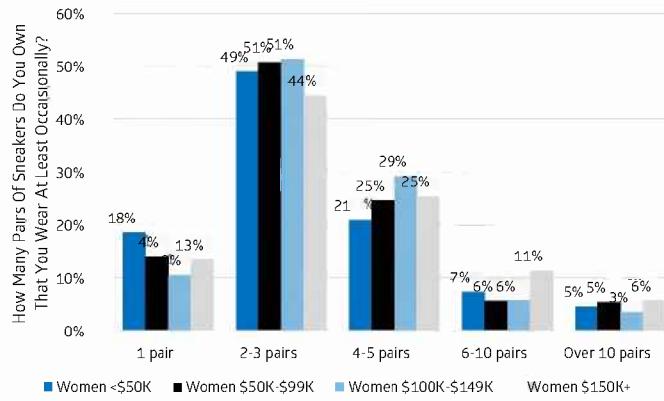
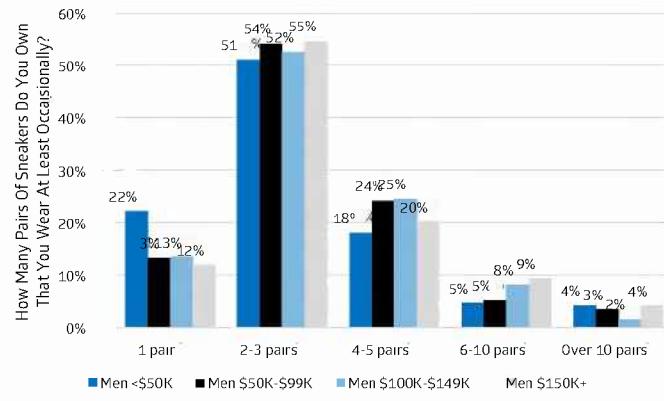


Figure 74 Sneaker Ownership – Women By Income Cohort



Data represents responses to the question "How many pairs of sneakers do you own, that you wear at least occasionally?" Excludes "I don't own a pair of sneakers" responses. Source: Cowen Consumer Tracker Survey, N= ~314/month for total survey population, Feb-2022

Figure 75 Sneaker Ownership – Men By Income Cohort





## We Are Extremely Skeptical About The Role Of NFTs In The Video Game Ecosystem (Doug Creutz, Media and Entertainment)

Since NFTs are tradable digital assets, and since video games are a pre-eminent forum for the use of digital assets, it makes sense that people would try to marry the two together. **In our view though, as far as video games are concerned, NFTs are a solution for a problem that doesn't exist, and at that a solution with many serious problems.** We don't expect NFTs to ever have a meaningful impact on the games-for-entertainment segment of the business; at most, we think NFTs will sit in a niche of the market that is gamified speculation. We would also not be surprised to see them regulated out of existence completely, either by financial regulators or gambling regulators.

The most well-known/successful NFT-focused game launched thus far is Sky Mavis' *Axie Infinity*, which debuted in 2018 and is playable on PC, iOS, and Android. The game itself is a Pokémon-like experience, where you breed and battle digital pets (known as Axies). Players have to front an initial cost to purchase a starting set of Axies, but then through playing can earn cryptocurrency which can be extracted from the game economy (and exchanged for fiat currency). The in-game currency peaked at a [market cap of \\$16.7B](#) in August 2021 (more than the current equity market cap of *Grand Theft Auto* publisher Take-Two). Since then, however, the game has suffered many setbacks:

- The price of the in-game 'Smooth Love Potion' utility token (necessary for breeding Axies), a major source of income for players of the game, began crashing in late summer 2021 due to oversupply, and has since fallen over 98% from its peak of \$0.35.
- The crash in the in-game currency significantly affected players across the game, but especially in the Philippines. Filipinos had become a significant portion of overall players (35% of overall traffic in the game per Sky Mavis) as they attempted to supplement their daily income through earnings in *Axie Infinity*, particularly after a recession in 2020. However, by late 2021, the earnings of a typical *Axie Infinity* player [had fallen below the Filipino minimum wage](#).
- As a result, player counts also began declining, with [DAUs dropping 45%](#) between November 2021 and March 2022. [This caused angst](#) among some of the game's power players, whose labor force started shrinking rapidly.
- Then, in March 2022, the Ronin blockchain network (which allows players to transfer money in and out of the game) suffered a \$600MM hack. This led to trading on Ronin being frozen (and it remains so as of May 16). Sky Mavis has raised \$150MM to refund part of the \$400MM in the hack that was determined to belong to players.
- Finally, the significant decline in crypto markets over the past several weeks has put added pressure on the *Axie* economy, with [Smooth Love Potions now trading at less than a penny](#).

As we said above, we think NFTs are a solution to a problem that doesn't exist in gaming. Most video games these days already have functional in-game economies that allow players to purchase digital assets and use them in the game. Some of these games also allow items to be bartered between players; this includes in-game auction houses

 which allow players to buy items using in-game currency, and occasionally, fiat currency (though experiments in the latter [have a checkered history](#)). We see several issues with NFTs that we think will prevent them from ever becoming a mass market phenomenon in video games:

**NFTs have no interoperability between games.** If you buy a piece of physical art for your house, and then you decide to move to a different house, you can move the art with you and hang it in the new house. However, the ability to transfer a digital asset from one game to another is essentially nonexistent, [because games are coded radically differently from one another](#). Even if coding obstacles are overcome, you have the problem of maintaining the integrity of the game experience. Imagine a player who buys an AK-47 NFT in a *Tom Clancy* game and then brings it over to a 17<sup>th</sup> century *Assassin's Creed* game – any pretense of having a balanced game goes right out the window, which tends to significantly diminish the fun factor.

**If a game shuts down, you may 'own' the NFT, but it has no practical value.** One pitch for NFTs in gaming is that the player will always own the digital asset, no matter what happens to the game. However, since NFTs are not interoperable between games, the value of that feature is virtually nil. A game NFT without a game to play it in becomes useless digital code, which also means its resale value is likely to be zero. A Formula 1 NFT game that was recently shut down (due to a loss of the underlying license by the game developer) attempted to circumvent this through [offering players NFTs in a new game it was developing](#), but given that some players had spent six figures buying NFTs in the original game, we suspect the loss of value was enormous.

**Pay-to-earn looks a lot like pay-to-win.** Any game that allows players to buy in-game assets risks becoming 'pay-to-win', e.g., players who spent lots of money have significant advantages in the game over those who don't. This tends to make the game less fun for non-spenders, which can erode the player base over time. Given that NFT games are almost completely about buying and selling digital assets that are supposed to retain value, they are play-to-win almost by definition.

**Allowing players to take money out of game economies risks running afoul of gambling regulation.** One of the key stipulations of most gambling regulations is that an activity can only be considered gambling if a player can receive money or items of real-world value. Since, in video games, random reward mechanisms yield digital assets that have no real value outside the game<sup>1</sup>, that has shielded video game mechanisms such as loot boxes from being regulated as gambling. In an NFT game, the entire point is to allow money to flow in and out of the game, which opens up the game to potential scrutiny from gambling regulators if the acquisition of digital assets includes an element of randomness (which is often the case).

**Managing the economy of a live service game is difficult; managing the economy of an NFT game is insanely difficult, and very vulnerable to corruption.** Balancing the creation, usage, and value of digital assets and currencies in live service video games is incredibly complicated and important. A badly balanced game economy can rapidly diminish player interest in a game as economies tend to be entwined with progression mechanisms, and progression mechanisms (such as levelling or triumph/achievement systems) are a cornerstone of keeping players engaged. A progression mechanism that is too slow quickly becomes frustrating, while a progression mechanism that is too fast risks being run through quickly, leaving gamers with nothing to do. In an NFT game, developers not only have to manage this issue, but also the issue of the real-world value of in-game

<sup>1</sup> Actually, many games with substantial in-game economies also see the creation of online black markets where players can buy and sell their accounts, thus allowing their digital assets to be exchanged for real money. However, since this activity is generally against a game's terms of service, it has not been viewed by courts as being an issue with regard to gambling regulation.



currency. As we mentioned above, the crash in value of Smooth Love Potions in *Axie Infinity* significantly decreased the size of the player base. If your game attracts people more because it's a paying job than because it's fun, and suddenly it doesn't pay well because you messed up the economy, people aren't going to stick around. You also have the issue that the developers themselves likely have a stake in the value of the in-game currency, and therefore the temptation to put your thumb on the scales for your own benefit and engage in self-dealing is enormous. While we haven't yet seen this manifest in a serious way (though [rug-pulls](#) are all too common), we believe it could be a serious issue in the future.

**NFTs are largely viewed as toxic by gamers.** Generally speaking, excitement about the marriage of crypto and gaming has come from crypto believers and not gamers. While some company managements have expressed significant interest in NFTs and begun investing in them (Ubisoft and Square Enix being probably the two most prominent examples), very few within the gaming community have responded with enthusiasm. Objections tends to center around (1) the speculative nature of NFTs, (2) the negative ecological consequences of NFTs, and (3) general distrust of the pecuniary motivations of management when people just want a great entertainment experience. Several NFT game announcements have been [ratioed into oblivion](#). Many gamers have made it clear that NFTs are not something they want, and several NFT announcements by publishers have been [rescinded almost immediately](#) after waves of negative reactions. We believe that video game companies which insist on pushing forward with NFTs despite obvious dislike from their consumers risk facing negative financial consequences.

#### Links To Interactive Charts In This Report

[https://www.datawrapper.de/\\_/Q7Pp0/](https://www.datawrapper.de/_/Q7Pp0/)

[https://www.datawrapper.de/\\_/vMeOb/](https://www.datawrapper.de/_/vMeOb/)

[https://www.datawrapper.de/\\_/VR8f0/](https://www.datawrapper.de/_/VR8f0/)

## Appendix – Demographic Analysis Of “Active” Buyer And Sellers Of NFTs

Figure 76 “Active” Buyers/Sellers Of NFTs - Gender

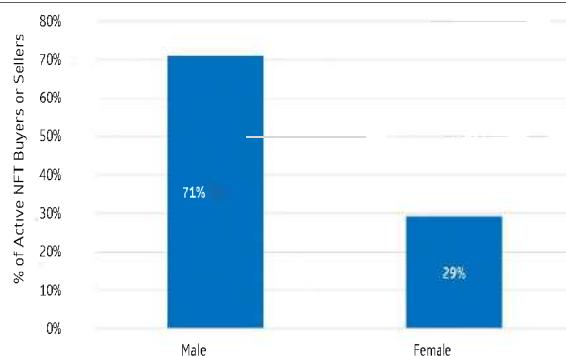


Figure 77 “Active” Buyers/Sellers Of NFTs - Age

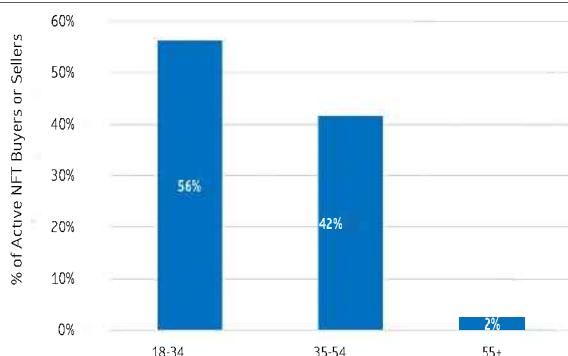
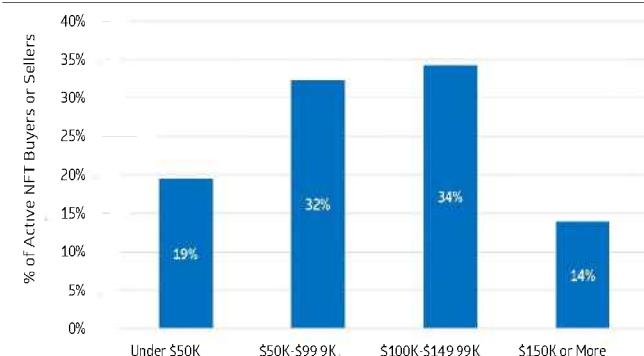


Figure 78 “Active” Buyers/Sellers Of NFTs - Income



Source: Cowen Consumer Discretionary Survey, N=228 average for Total survey population or cumulative N=683, Feb-2022-April 2022

Figure 79 “Active” Buyers/Sellers Of NFTs - Ethnicity

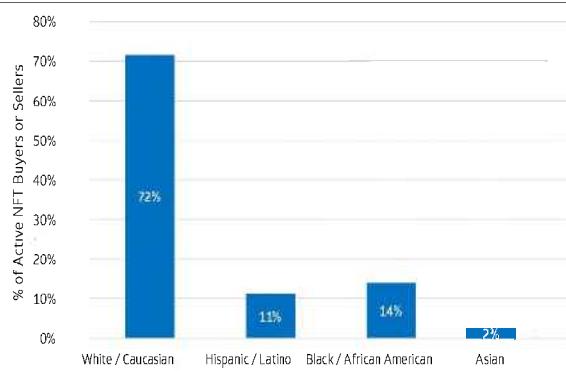


Figure 80 “Active” Buyers/Sellers Of NFTs - Regional

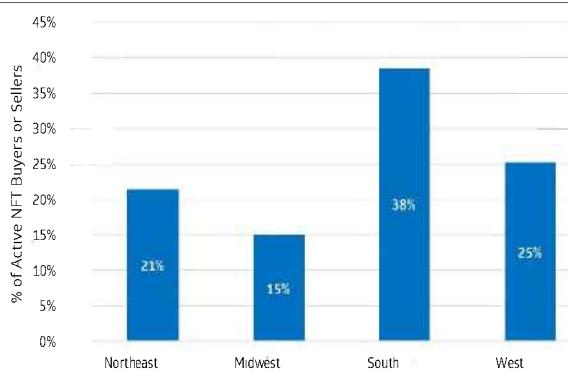
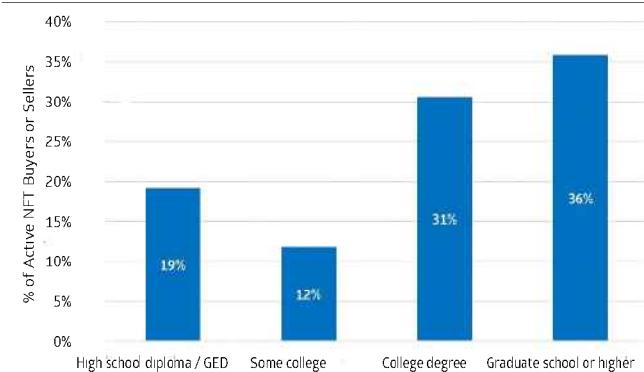


Figure 81 “Active” Buyers/Sellers Of NFTs – Education Level



Source: Cowen Consumer Discretionary Survey, N=228 average for Total survey population or cumulative N=683, Feb-2022-April 2022



Figure 82 John Kernen's Retail &amp; Consumer Brand Valuations (MMs)

Company	Ticker	Rating	Price	Cap. \$MMs	P/E		EV/EBITDA		EV/Sales			Five Year Min/Max				
					FY1	FY2	FY1	FY2	FY1	FY2	YTD	52 wk	P/E	EV/Sales	Min	Max
Nike	NKE	1	\$106.09	\$166,961	29x	23x	21.2x	17.4x	3.5x	3.2x	-36%	-20%	20x	73x	2.5x	5.7x
adidas	ADS	1	€ 171.34	€ 32,914	19x	15x	9.8x	8.4x	1.4x	1.3x	-31%	-41%	17x	118x	1.6x	3.3x
VF Corp.	VFC	1	\$46.46	\$18,068	14x	12x	11.2x	10.4x	1.9x	1.7x	-36%	-44%	12x	89x	2.1x	4.1x
Lululemon	LULU	1	\$266.95	\$34,174	28x	24x	16.8x	14.3x	4.4x	3.8x	-32%	-16%	22x	95x	3.1x	11.1x
Under Armour	UAA	1	\$9.55	\$4,244	14x	13x	7.5x	6.4x	0.8x	0.7x	-55%	-56%	14x	239x	1.1x	2.4x
Puma	PUM	2	€ 61.68	€ 9,303	23x	18x	9.9x	8.4x	1.3x	1.2x	-42%	-31%	25x	233x	1.2x	2.7x
On Holding	ONON	NR	\$19.62	\$6,172	NA	NA	41.2x	26.2x	5.2x	3.7x	-48%	NA	NM	NM	12.5x	12.5x
FIGS	FIGS	2	\$8.78	\$1,446	NA	NA	14.6x	9.8x	2.4x	1.9x	NA	NA	NM	NM	NM	NM
Deckers Outdoors	DECK	1	\$253.82	\$6,914	14x	12x	8.7x	7.5x	1.8x	1.6x	-31%	-18%	9x	28x	1.1x	3.6x
Columbia Sportswear	COLM	1	\$74.33	\$4,673	13x	11x	6.7x	6.5x	1.2x	1.1x	-23%	-27%	12x	70x	1.4x	2.6x
Skechers	SKX	2	\$35.34	\$5,505	12x	10x	6.5x	5.5x	0.9x	0.8x	-19%	-24%	7x	59x	0.6x	1.5x
Ralph Lauren Corp	RL	1	\$90.86	\$6,466	11x	11x	5.2x	5.0x	1.1x	1.1x	-23%	-24%	8x	2244x	0.8x	2.1x
PVH Corp	PVH	2	\$63.52	\$4,289	7x	6x	4.2x	3.9x	0.7x	0.7x	-40%	-42%	3x	40x	0.8x	1.6x
Capri Holdings*	CPRI	1	\$40.67	\$6,004	7x	6x	5.3x	4.8x	1.6x	1.4x	-37%	-24%	2x	89x	1.0x	2.7x
Canada Goose*	GOOS	1	\$20.18	\$2,103	15x	13x	8.7x	7.3x	2.3x	2.0x	-46%	-49%	NM	NM	3.4x	14.2x
Levi Strauss & Co.	LEVI	NR	\$16.00	\$6,342	10x	9x	6.8x	6.1x	1.2x	1.1x	-35%	-40%	8x	52x	1.1x	2.4x
Hanesbrands	HBI	2	\$11.45	\$3,993	7x	6x	7.1x	6.7x	1.0x	1.0x	-30%	-39%	3x	41x	1.0x	2.0x
Gildan Activewear	GIL	NR	\$30.64	\$5,723	10x	9x	8.4x	8.0x	2.0x	1.9x	-27%	-12%	7x	24x	1.4x	3.2x
Foot Locker	FL	2	\$31.39	\$3,016	7x	7x	3.6x	3.9x	0.7x	0.7x	-27%	-46%	3x	24x	0.4x	1.1x
Dick's Sporting Goods	DKS	1	\$75.68	\$6,181	6x	6x	2.8x	2.8x	0.7x	0.6x	-34%	-4%	5x	34x	0.4x	1.0x
Yeti	YETI	1	\$44.33	\$3,819	15x	13x	10.3x	8.6x	2.3x	2.0x	-46%	-48%	18x	66x	2.2x	6.3x
Crocs	CROX	NR	\$52.62	\$3,240	5x	4x	6.1x	5.1x	1.7x	1.5x	-59%	-47%	6x	178x	0.6x	4.3x
Steve Madden	SHOO	NR	\$34.44	\$2,751	12x	10x	7.8x	7.2x	1.2x	1.2x	-25%	-12%	9x	62x	1.1x	2.5x
Stitch Fix	SFIX	NR	\$8.10	\$879	NA	NA	NA	NA	0.4x	0.3x	-57%	-83%	43x	156x	0.7x	5.5x
Allbirds	BIRD	1	\$4.27	\$634	NA	NA	NA	NA	1.1x	0.9x	-72%	NA	NA	NA	2.2x	7.0x

\*Covered by Oliver Chen

1=Outperform; 2=Market Perform; 3=Underperform; and NR=Not Rated. Bloomberg pricing 5/20/22. \*Covered by Oliver Chen. Source: Company Reports, Cowen and Company

Ticker	Rating	Price*	Price Target	Ticker	Rating	Price*	Price Target
YETI	Outperform	\$44.06	\$71.00	BIRD	Outperform	\$4.68	\$7.00
NKE	Outperform	\$108.63	\$139.00	PUM.GR	Market Perform	€62.90	€94.00
ADS.GR	Outperform	€175.48	€205.00	VFC	Outperform	\$46.47	\$57.00
DECK	Outperform	248.13	\$407.00	SKX	Market Perform	\$36.35	\$40.00
MC FP	Outperform	€560.90	€885.00	BRLT	Outperform	\$4.03	\$10.00
RL	Outperform	\$90.95	\$171.00	LULU	Outperform	\$272.84	\$497.00

\*As of 05/23/2022

## VALUATION METHODOLOGY AND RISKS

### Valuation Methodology

#### Apparel, Footwear & Textiles:

Our valuation methodology is primarily based on Price-to-Earnings (P/E), supplemented by, in some cases, Enterprise Value to EBITDA (EV/EBITDA) and Price-to-Free Cash Flow (P/FCF) ratios and DCF analysis. We may also use Enterprise Value to Revenue (EV/Revs) for companies operating at depressed levels of profitability. In some cases we use probability-weighed, scenario-based decision trees as a basis for devising our price targets. We incorporate the company's and its peers' historical and current valuation multiples, as well as our analysis of future growth rates, company-specific risks, return on invested capital, and other inputs from our research when devising our valuation multiples and the probabilities we assign to different scenarios when developing our price targets.

We make investment recommendations on certain early stage, pre-revenue companies based upon an assessment of their business model, technology, probability of market success, and the potential market opportunity, balanced by an assessment of applicable risks. Such companies may not be assigned a price target.

#### Luxury Brands:

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We make investment recommendations on certain early stage, pre-revenue companies based upon an assessment of their business model, technology, probability of market success, and the potential market opportunity, balanced by an assessment of applicable risks. Such companies may not be assigned a price target.

#### Retail & Consumer Brands:

Our valuation methodology is primarily based on Price-to-Earnings (P/E), supplemented by, in some cases, Enterprise Value to EBITDA (EV/EBITDA) and Price-to-Free Cash Flow (P/FCF) ratios and DCF analysis. We may also use Enterprise Value to Revenue (EV/Revs) for companies operating at depressed levels of profitability. In some cases we use probability-weighed, scenario-based decision trees as a basis for devising our price targets. We incorporate the company's and its peers' historical and current valuation multiples, as well as our analysis of future growth rates, company-specific risks, return on invested capital, and other inputs from our research when devising our valuation multiples and the probabilities we assign to different scenarios when developing our price targets.

We make investment recommendations on certain early stage, pre-revenue companies based upon an assessment of their business model, technology, probability of market success, and the potential market opportunity, balanced by an assessment of applicable risks. Such companies may not be assigned a price target.



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### **Luxury Brands:**

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**Market Perform (2):** The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

**Underperform (3):** Stock is expected to achieve a total negative return of at least 10% over the next 12 months

**Assumption:** The expected total return calculation includes anticipated dividend yield

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Hold (b)	259	26.65%	21	8.11%
Sell (c)	6	0.62%	0	0.00%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's equity research rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's equity research ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's equity research ratings definitions. Cowen and Company Equity Research Rating Distribution Table does not include any company for which the equity research rating is currently suspended or any debt security followed by Cowen Credit Research and Trading.

Note: "Buy", "Hold" and "Sell" are not terms that Cowen and Company, LLC uses in its ratings system and should not be construed as investment options. Rather, these ratings terms are used illustratively to comply with FINRA regulation.

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